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Attorneys for Plaintiff
GATEKEEPER SYSTEMS, INC.

UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

GATEKEEPER SYSTEMS, INC., a Delaware corporation Plaintiff, v. ROCATEQ USA, LLC; and ROCATEQ INTERNATIONAL B.V., Defendants.	Case No. 8:22-cv-2092 **COMPLAINT FOR PATENT INFRINGEMENT** **DEMAND FOR JURY TRIAL**

Plaintiff GATEKEEPER SYSTEMS, INC. ("Gatekeeper") for its Complaint against Defendants ROCATEQ USA, LLC and ROCATEQ INTERNATIONAL B.V. (collectively, "Rocateq"), alleges as follows:

NATURE OF THE CASE

1. Plaintiff Gatekeeper files this complaint against Rocateq alleging infringement of United States Patent Nos. 8,463,540, 9,091,551, 9,637,151,

11,230,313, 9,845,072, 10,196,040 and 11,358,621 ("Patents-in-Suit"), arising under the patent laws of the United States, 35 U.S.C. §§ 1 et seq.

THE PARTIES

2. Gatekeeper is a Delaware corporation having a principal place of business at 90 Icon, Foothill Ranch, California 92610.

3. Gatekeeper designs, manufactures, and sells products that help retailers minimize merchandise loss and reduce expenditures relating to shopping carts. For example, Gatekeeper designs, manufactures, and sells products that help retailers prevent shopping carts from leaving a store's property by using locking wheels, and products that help retailers prevent shoplifters from taking unpaid merchandise from a store. Gatekeeper sells and distributes such products in the United States, including in this Judicial District.

4. Rocateq USA LLC is a California limited liability company having its principal place of business at 551 5th Street, Unit D/2, San Fernando, California 91340. Rocateq USA LLC may be served with process through its registered agent, Dirk Jan Van Welie, located at 551 5th Street, Unit D/2, San Fernando, California 91340.

5. Rocateq International B.V. is a Netherlands company having its principal place of business at Ebweg 2, 2991 LT Barendrecht, The Netherlands.

6. Upon information and belief, Rocateq markets and sells, inter alia, shopping cart loss prevention and inventory management products, including Rocateq Check Out Security, Cart Security and Cart Management systems, throughout the United States, including in this Judicial District.

JURISDICTION AND VENUE

7. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. §§ 100, et seq., including 35 U.S.C. § 271.

8. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

9. Venue in this District is proper under 28 U.S.C. § 1391 and 28 U.S.C. § 1400(b). On information and belief, Rocateq USA LLC and Rocateq International B.V. have committed acts of infringement in this District, directly and/or through intermediaries, by, among other things, making, using, offering to sell, selling, and/or importing products and/or services that infringe the Patents-in-Suit, as alleged herein. Rocateq International B.V. is a foreign corporation and venue is proper as to a foreign defendant in any district. Rocateq USA LLC has a regular and established place of business in this District. Rocateq USA LLC maintains corporate offices in this District at 551 5th Street, Unit D/2, San Fernando, California 91340 and has an agent for service of process at the same address.

10. This Court has personal jurisdiction over Defendants Rocateq. On information and belief, both entities have conducted and continue to conduct business in the State of California, including in the Central District of California. Further, both entities, directly and through subsidiaries and intermediaries have committed and continue to commit acts of patent infringement and/or contributed to or induced acts of patent infringement by others in this District and elsewhere in California and the United States. Additionally, Rocateq USA LLC has a principal place of business in this District (specifically, in San Fernando, California). Upon information and belief, Dutch entity Rocateq International B.V. established and has a place of business in the United States and this District in the form of Rocateq USA LLC in San Fernando, California. Upon information and belief, Rocateq USA LLC was established for, and had engaged in, activities that Rocateq International B.V. would have to undertake if not for Rocateq USA LLC's involvement. As such, all entities have purposefully availed themselves of the privilege of conducting business within this District; have established sufficient minimum contacts with this District such that they should reasonably and fairly anticipate being haled into court in this District; have purposefully directed activities at residents of this State; and at least a portion of the patent infringement

claims alleged herein arise out of or are related to one or more of the foregoing activities.

11. For example, Rocateq established an office in San Fernando, CA.[1] Its agent for process of service is located at the same address. Rocateq employs field service technicians at this office.[2] It posts listings for these positions on its website at https://rocateq.com/careers. In addition, on information and belief, Rocateq employs a number of other persons in this District and derives and has derived substantial revenue from goods and services provided to persons or entities in this District and from infringing acts occurring within this District.

BACKGROUND

12. Gatekeeper was founded in 1998. For more than 20 years, Gatekeeper, has been committed to setting the standard in cost-effective technologies for loss prevention, asset management and store optimization. Gatekeeper has introduced numerous products to the marketplace, including the SmartWheel®, an active RFID-enabled, self-locking shopping cart wheel, and the Purchek® Pushout Theft Prevention Solution.

13. "Pushout Theft" is a common technique for Organized Retail Crime (ORC) rings and everyday thieves. Pushout Theft typically involves a person placing merchandise in a shopping cart and pushing the cart out of the store without paying. Pushout theft allows thieves to clear out shelves, freezers and cabinets by walking out with a shopping cart filled with stolen merchandise. It is Gatekeeper's estimate that most pushout theft is never recorded, with multiple unnoticed smaller thefts for every major ORC pushout theft.

14. Gatekeeper's Purchek system reduces or eliminates pushout theft while preserving a customer's shopping experience. Leveraging Gatekeeper's self-locking SmartWheel technology and the Gatekeeper platform, the Purchek anti-

[1] https://rocateq.com/contact/ [last checked Nov. 14, 2022].
[2] https://rocateq.com/careers/#jobs

theft system reduces shrinkage (the retail industry term for loss of merchandise from causes other than sales, such as theft), increases sales and protects employees.

15. In certain installations, the Purchek system works in the following way. In a typical shopping experience:

i. As a shopper enters the store, the SmartWheel wheel receives entry permission allowing a customer to shop for an unlimited time.

ii. After the customer purchases their goods, the SmartWheel receives exit permission, and the cart is now free to exit the store.

iii. The exit permission is fully adjustable allowing enough time for customers to visit other in-store services. The Purchek system protects the store without the customer noticing.

16. However, in a pushout theft attempt:

i. As a shopper enters the store, the SmartWheel wheel receives entry permission allowing a customer to shop for an unlimited time.

ii. As the thief skips the checkout line, the SmartWheel does not receive exit permission.

iii. As the thief attempts to exit, the wheel locks thereby disabling the cart, an alarm is triggered alerting store personnel, and/or video is captured and loss prevention personnel is electronically notified. With the cart immobilized, most thieves flee empty handed rather than risk arrest.

17. The Purchek system protects the store in at least three ways: apprehending the cart containing the merchandise, avoiding the need to confront the would-be thief or thieves, and by discouraging or driving away thieves. The self-locking SmartWheel wheel automatically immobilizes the cart, thereby apprehending merchandise, preventing the cart and merchandise in the cart from leaving the store and reducing shrinkage and out of stocks. By making it more difficult to commit pushout theft, the Purchek system deters ORC from repeatedly

targeting a location.

18. In recognition of Gatekeeper's innovations, the United States Patent Office has awarded Gatekeeper numerous patents, including but not limited to the following.

19. On June 11, 2013, the United States Patent and Trademark Office duly and legally issued United States Patent No. 8,463,540 (the "'540 Patent"), entitled "Two-Way Communication System for Tracking Locations and Statuses of Wheeled Vehicles" after full and fair examination. The application that led to the '540 Patent, U.S. Patent Application No. 11/277,016, claims priority to provisional application numbers 60/663,147, 60/663,327. A true and correct copy of the '540 Patent is attached hereto as **Exhibit A**.

20. On July 28, 2015, the United States Patent and Trademark Office duly and legally issued United States Patent No. 9,091,551 (the "'551 Patent"), entitled "System for Controlling Usage of Shopping Cart or Other Human-Propelled Vehicles" after full and fair examination. The application that led to the '551 Patent, U.S. Patent Application No. 12/552,118, was a continuation of U.S. Patent Application No. 11/277,016, which issued as U.S. Patent No. 8,463,540. A true and correct copy of the '551 Patent is attached hereto as **Exhibit B**.

21. On May 2, 2017, the United States Patent and Trademark Office duly and legally issued United States Patent No. 9,637,151 (the "'151 Patent"), entitled "System for Detecting Unauthorized Store Exit Events" after full and fair examination. The application that led to the '151 Patent, U.S. Patent Application No. 14/669,221, was a continuation of U.S. Patent Application No. 13/907,351, which issued as U.S. Patent No. 9,783,218, and U.S. Patent Application No. 11/277,016, which issued as U.S. Patent No. 8,463,540. A true and correct copy of the '151 Patent is attached hereto as **Exhibit C**.

22. On January 25, 2022, the United States Patent and Trademark Office duly and legally issued United States Patent No. 11,230,313 (the "'313 Patent"),

entitled "System for Monitoring and Controlling Shopping Cart Usage" after full and fair examination. The application that led to the '313 Patent, U.S. Patent Application No. 17/225,830, was a continuation of U.S. Patent Application No. 16/995,471, which issued as U.S. Patent No. 11,299,189, which was a continuation of U.S. Patent Application No. 16/224,046, which issued as U.S. Patent No. 10,745,040, which was a continuation of U.S. Patent Application No. 15/877,187, which issued as U.S. Patent No. 10,189,494, which was a continuation of U.S. Patent Application No. 15/191,303, which issued as U.S. Patent No. 9,914,470, which was a continuation of U.S. Patent Application No. 15/093,545, which issued as U.S. Patent No. 9,676,405, which was a continuation of U.S. Patent Application No. 14/821,244, which issued as U.S. Patent No. 9,322,658, which was a continuation of U.S. Patent Application No. 13/907,502, which issued as U.S. Patent No. 9,758,185, which was a continuation of U.S. Patent Application No. 11/277,016, which issued as U.S. Patent No. 8,463,540. A true and correct copy of the '313 Patent is attached hereto as **Exhibit D**.

23. On December 19, 2017, the United States Patent and Trademark Office duly and legally issued United States Patent No. 9,845,072 (the "'072 Patent"), entitled "Direction Crossing Detector for Containment Boundary" after full and fair examination. The application that led to the '072 Patent, U.S. Patent Application No. 15/674,364, claims priority to provisional application number 62/374,677. A true and correct copy of the '072 Patent is attached hereto as **Exhibit E**.

24. On February 5, 2019, the United States Patent and Trademark Office duly and legally issued United States Patent No. 10,196,040 (the "'040 Patent"), entitled "Direction Crossing Detector for Containment Boundary" after full and fair examination. The application that led to the '040 Patent, U.S. Patent Application No. 15/842,502, was a continuation of U.S. Patent Application No. 15/674,364, which issued as U.S. Patent No. 9,845,072. A true and correct copy of the '040

Patent is attached hereto as **Exhibit F**.

25. On June 14, 2022, the United States Patent and Trademark Office duly and legally issued United States Patent No. 11,358,621 (the "'621 Patent"), entitled "System for Monitoring and Controlling Shopping Cart Usage" after full and fair examination. The application that led to the '621 Patent, U.S. Patent Application No. 17/564,648, claims priority to U.S. Application No. 17/225,830, filed Apr. 8, 2021, which is a continuation of U.S. Application No. 16/995,471, filed Aug. 17, 2020, which is a continuation of U.S. Application No. 16/224,046, filed Dec. 18, 2018 (now U.S. Pat. No. 10,745,040), which is a continuation of U.S. Application No. 15/877,187, filed Jan. 22, 2018 (now U.S. Pat. No. 10,189,494), which is a continuation of U.S. Application No. 15/191,303, filed Jun. 23, 2016 (now U.S. Pat. No. 9,914,470), which is a continuation of U.S. Application No. 15/093,545, filed Apr. 7, 2016 (now U.S. Pat. No. 9,676,405), which is a continuation of U.S. Application No. 14/821,244, filed Aug. 7, 2015 (now U.S. Pat. No. 9,322,658), which is a continuation of U.S. Application No. 13/907,502, filed May 31, 2013 (now U.S. Pat. No. 9,758,185), which is a continuation of U.S. Application No. 11/277,016, filed Mar. 20, 2006 (now U.S. Pat. No. 8,463,540), which claims the benefit under 35 U.S.C. § 119(e) of U.S. Provisional Patent Appl. Nos. 60/663,147, 60/663,327, and 60/663,195, all filed on Mar. 18, 2005. A true and correct copy of the '621 Patent is attached hereto as **Exhibit G**.

26. Gatekeeper is the assignee of all right, title, and interest in and to the '540 Patent, '551 Patent, '151 Patent, '313 Patent, '072 Patent, the '040 Patent and the '621 Patent (collectively, the "Patents-in-Suit") and possesses all rights of recovery under the Patents-in-Suit, including the right to recover damages for past infringement.

27. The Patents-in-Suit are valid, enforceable, and unexpired.

NOTICE

28. By at least six years prior to the filing date of this Complaint,

Gatekeeper provided notice to the public under 35 USC § 287(a) of its '540 Patent by marking its relevant products. On information and belief, Rocateq became aware of the '540 Patent as early as such date.

29. By at least six years prior to the filing date of this Complaint, Gatekeeper provided notice to the public under 35 USC § 287(a) of its '551 Patent by marking its relevant products. On information and belief, Rocateq became aware of the '551 Patent as early as such date.

30. Gatekeeper further provided notice to Rocateq on or around June 2, 2021, when it sent a letter informing Rocateq of its infringement of Gatekeeper's '540 Patent, '551 Patent, and '151 Patent. Gatekeeper informed Rocateq that "[a]t least the [Rocateq] Check Out Security system employs technology patented in at least the above-identified patents, including: Claims 1 and 45 of U.S. Patent No. 8,463,540, Claims 17 and 18 of U.S. Patent No. 9,091,551, and Claim 15 of the U.S. Patent No. 9,637,151. Copies of the patents are enclosed. Rocateq's importation, making, using, selling and inducing and contributing to infringement by its customers violates 35 U.S.C. § 271(a), (b) and (c), entitling Gatekeeper to seek damages and injunctive relief." Rocateq became aware of the '540, '151 and '551 Patent no later than the receipt of this letter, on or around June 2, 2021.

31. Rocateq has had actual knowledge of Gatekeeper's '313 Patent, '621 Patent, '072 Patent, and '040 Patent at least as early as the filing of this Complaint.

FIRST CAUSE OF ACTION

INFRINGEMENT OF U.S. PATENT NO. 8,463,540

32. Gatekeeper incorporates and realleges each of the allegations contained in paragraphs 1 through 31 of this Complaint as if fully set forth herein.

33. Rocateq is not licensed under the '540 Patent and has no other right or permission to practice the inventions claimed therein.

34. On information and belief, Rocateq has infringed and continues to infringe, directly (alone or jointly), literally, and/or under the doctrine of

equivalents, in violation of 35 U.S.C. § 271, one or more claims of the '540 Patent by performing, without authority, one or more of the following acts: making, having made, using, importing, selling, and offering for sale in the United States one or more products or services that embody the invention claimed in the '540 Patent, including but not limited to the Rocateq Check Out Security system. Since receiving notice of the '540 Patent, Rocateq has knowingly infringed, and continues to infringe, one or more claims of the '540 Patent by making, having made, using, importing, selling, and offering for sale in the United States the Rocateq Check Out Security system, which products constitute a material part of the invention and are not staple articles or commodities of commerce suitable for substantial non-infringing use.

35. The Rocateq Check Out Security ("COS") system embodies patented inventions of the '540 Patent and infringes at least Claims 1 and 45 of the '540 Patent.

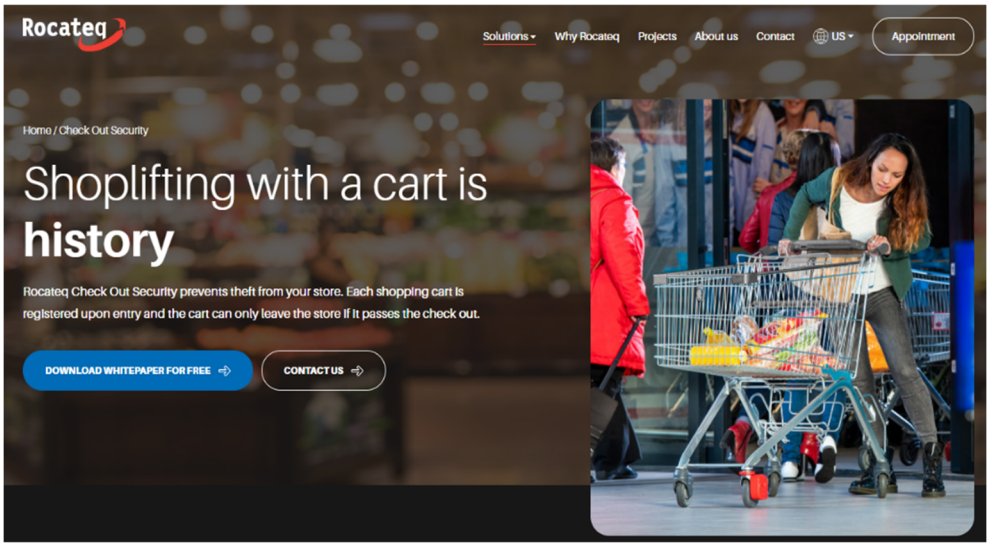
36. For example, Rocateq's Check Out Security system comprises:

> "1. A system for use on a shopping cart to enable movement of the shopping cart to be monitored and controlled, the system comprising:
>
> a shopping cart wheel;
>
> a braking mechanism configured to inhibit movement of the shopping cart; and
>
> electronic circuitry coupled to the braking mechanism, said electronic circuitry configured to detect signals that reflect a current location of the shopping cart wheel, and to transmit status messages via a wireless radio frequency (RF) link,

> including status messages reflective of said signals detected by the electronic circuitry, said electronic circuitry comprising:
>
> a Very Low Frequency (VLF) receiver configured to detect VLF signals transmitted by a VLF transmitter;
>
> an RF transceiver configured to communicate bi-directionally over the wireless RF link in a frequency band that falls substantially higher than a VLF frequency band; and
>
> a controller coupled to the VLF receiver, the RF transceiver, and the braking mechanism, said controller configured to control the braking mechanism;
>
> wherein the electronic circuitry is configured to determine, based at least in part on messages received over the RF link with the RF transceiver, whether to respond to detection of a VLF signal by the VLF receiver by activating the braking mechanism."[3]
>
> "45. The system of claim 1, wherein the RF transceiver operates at 2.4 GHz."[4]

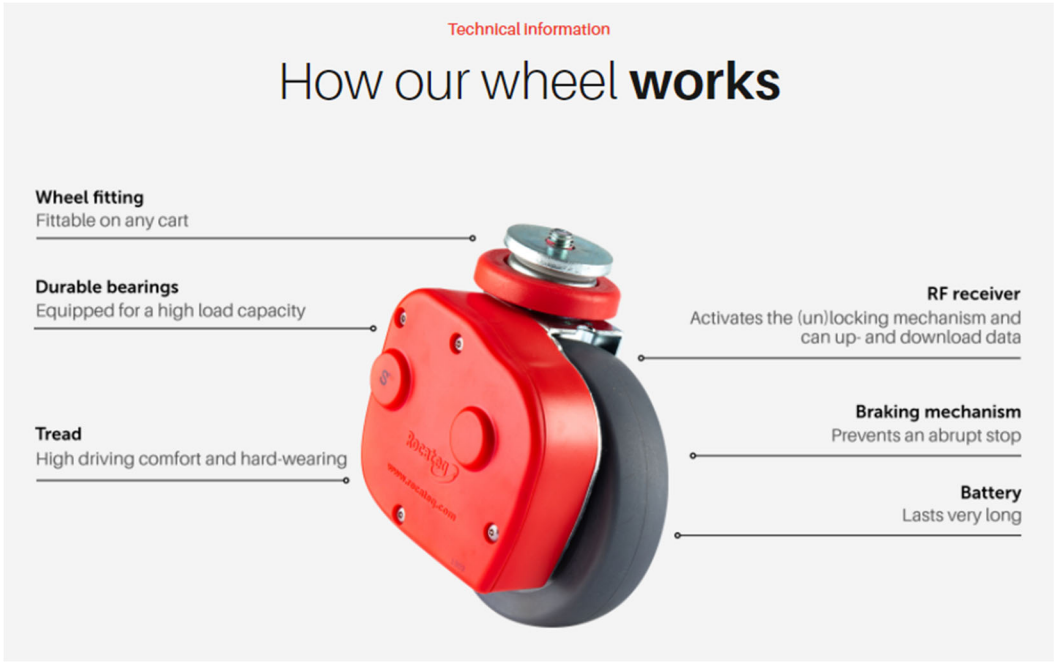
37. As explained on Rocateq's website and in documents describing Rocateq's system, Rocateq's COS system is used on a shopping cart and enables the cart's movement to be monitored and controlled:

[3] '540 Patent, Claim 1.
[4] '540 Patent, Claim 45.



"Rocateq Check Out Security prevents theft from your store. Each shopping cart is registered upon entry and the cart can only leave the store if it passes the check out."[5]

38. Rocateq's COS system includes a shopping cart wheel and a braking mechanism configured to inhibit movement of the shopping cart, as shown below.[6]



[7]

[5] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].
[6] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].
[7] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].

39. Rocateq's COS system has electronic circuitry that is coupled to the braking mechanism, detects signals that reflect a current location of the shopping cart wheel, and transmits status messages via a wireless RF link, including status messages reflective of the signals detected by the electronic circuitry.

40. Specifically, Rocateq's wheel detects, at a store entrance and exit, an 8 KHz signal (also called an "A" signal) from an "Intellibox."[8]

41. Rocateq's wheel detects, at a checkout lane, a 2.4 GHz signal (also called a "B" signal) from a Checkout Transmitter (also called a "Wireless 2.4 GHz transmitter").[9]

42. Rocateq's wheel transmits, near the store exit, a 2.4 GHz alarm signal to the Intellibox.[10] The alarm signal is a status signal reflective of the wheel detecting a particular sequence of signals.

43. Operation of Rocateq's wheel is discussed in Rocateq's FCC filings for the Checkout Transmitter and Intellibox, including as follows[11]:

> **3.1. The B signal (2.4 GHz) emitted by Wireless 2.4 GHz transmitter makes the relevant shopping cart casters unlock after receiving A signal (8.13KHz) again.**
>
> 31 Intellibox emits A signal (8.13KHz), C signal (8.13KHz), H signal (8.13KHz), and receives alarm signal (2.4 GHHz). Relevant shopping cart casters receive two A signals (8.13KHz) and lock. Intellibox receives alarm signal and will alarm.

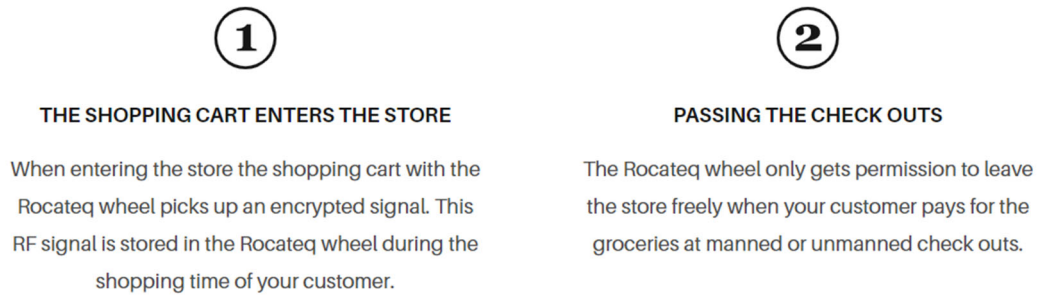
[8] https://fcc.report/FCC-ID/2AGTS-INTELLIBOX/4634205.pdf [last checked Nov. 14, 2022].

[9] https://fcc.report/FCC-ID/2AGTS-TRANSMITTER/4627456 [last checked Nov. 14, 2022].

[10] https://fcc.report/FCC-ID/2AGTS-INTELLIBOX/4634205.pdf [last checked Nov. 14, 2022].

[11] https://fcc.report/FCC-ID/2AGTS-TRANSMITTER/4627456 [last checked Nov. 14, 2022]; https://fcc.report/FCC-ID/2AGTS-INTELLIBOX/4634205.pdf [last checked Nov. 14, 2022].

44. Rocateq also disclosed the operation of its wheel on its website - see the first two steps of the system's operational summary[12]:



45. Rocateq's wheel receives the 8 KHz signal, which is a VLF signal transmitted from the Intellibox. A VLF (very low frequency) signal is in the range of about 3 KHz to about 30 KHz. See "Rec. ITU-R V.431-7 Nomenclature of the Frequency and Wavelength Bands Used in Telecommunications."[13]

TABLE 1

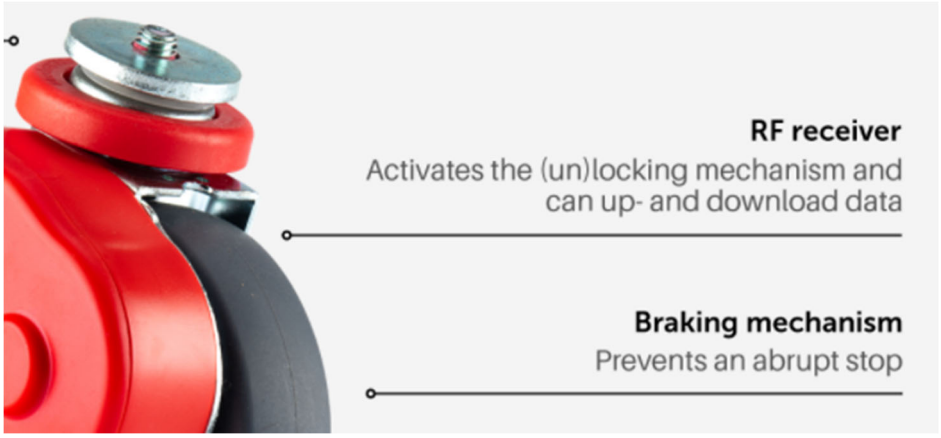
Band number	Symbols	Frequency range (lower limit exclusive, upper limit inclusive)	Corresponding metric subdivision	Metric abbreviations for the bands
3	ULF	300-3 000 Hz	Hectokilometric waves	B.hkm
4	VLF	3-30 kHz	Myriametric waves	B.Mam

46. The '540 patent expressly indicates that the VLF receiver may be an 8 KHz receiver. *See* '540 Patent, 12:10-13.

47. Rocateq's wheel receives and transmits a 2.4 GHz signal, which is a frequency band that falls substantially higher than the VLF frequency band of about 3-30 KHz. The '540 patent expressly indicates that the RF transceiver may be a 2.4GHz transceiver. *See* '540 Patent, 11:59-61. As shown below, Rocateq's wheel

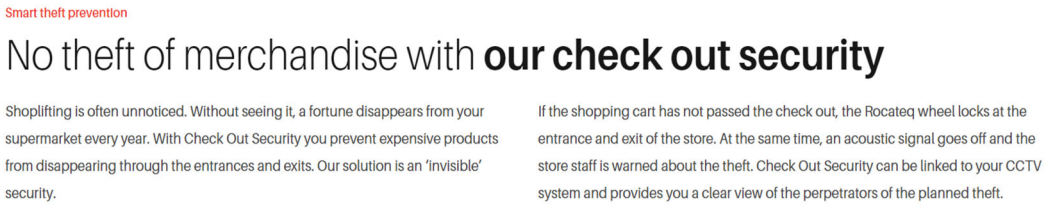
[12] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].
[13] https://web.archive.org/web/20131031020427/http://www.itu.int/dms_pubrec/itu-r/rec/v/R-REC-V.431-7-200005-I%21%21PDF-E.pdf. [last checked Oct. 6, 2022].

"can up- and download data."[14]



48. Rocateq's wheel includes a controller coupled to the VLF receiver, the RF transceiver, and the braking mechanism, where the controller is configured to control the braking mechanism. Based on Rocateq's description of the operation of its COS system, the wheel controls the brake based on signals received by the VLF receiver and RF transceiver. The circuitry that performs this function satisfies this claim limitation.

49. Specifically, Rocateq's wheel determines, based on whether the 2.4 GHz signal from the Checkout Transmitter has been received, whether to respond to detection of the 8 KHz signal near the store exit by activating the braking mechanism, as shown below.[15]

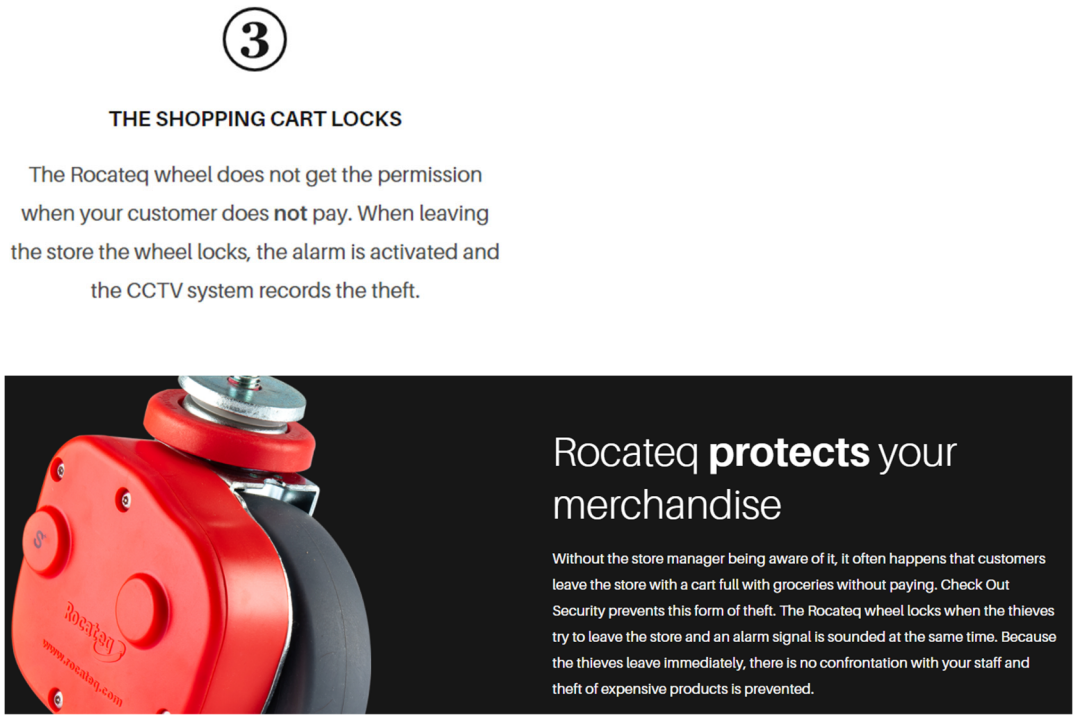

Smart theft prevention

No theft of merchandise with **our check out security**

Shoplifting is often unnoticed. Without seeing it, a fortune disappears from your supermarket every year. With Check Out Security you prevent expensive products from disappearing through the entrances and exits. Our solution is an 'invisible' security.

If the shopping cart has not passed the check out, the Rocateq wheel locks at the entrance and exit of the store. At the same time, an acoustic signal goes off and the store staff is warned about the theft. Check Out Security can be linked to your CCTV system and provides you a clear view of the perpetrators of the planned theft.

[14] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].
[15] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].



50. As shown above, Rocateq's wheel receives and transmits a 2.4 GHz signal.

51. On information and belief, Rocateq has infringed and continues to infringe indirectly by way of inducement and contributory infringement, literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271, one or more claims of the '540 Patent by performing, without authority, one or more of the following acts: making, having made, using, importing, selling, and offering for sale in the United States one or more products or services that embody the invention claimed in the '540 Patent, including but not limited to Rocateq's COS system, and encouraging and instructing its customers, end-users, partners, and third parties to make and/or use the COS system in a manner that directly infringes the '540 Patent. Rocateq additionally contributes to and induces direct infringement by its customers, end-users, partners, and other third parties by instructing and encouraging them to make and/or use the COS system in a manner that directly infringes at least one claim of the '540 Patent.

52. Since receiving notice of the '540 Patent, Rocateq has knowingly contributed to the direct infringement of and induced direct infringement of, and continues to knowingly contribute to the direct infringement of and induce direct infringement of, one or more claims of the '540 Patent by its customers, end-users, partners, and third parties with specific intent that the COS system be made and/or used by its customers, end-users, partners, and third parties to directly infringe the '540 Patent, which products constitute a material part of the invention and are not staple articles or commodities of commerce suitable for substantial non-infringing use.

53. Rocateq instructs and encourages its customers, end-users, partners, and third parties to configure and to use the COS system in a manner that directly infringes at least Claims 1 and 45 of the '540 Patent as described above. See also generally https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].

54. Rocateq further provides information and technical support on its website (e.g., www.rocateq.com) that instructs and encourages customers, end-users, partners, and third parties on how to use the Rocateq COS system, and thereby induces and contributes to direct infringement by its customers, end-users, partners, and third parties.

55. The information and materials provided by Rocateq contain detailed descriptions and instructions for making and using the system claimed in at least Claims 1 and 45 of the '540 Patent including, at least, that Rocateq requires that one of the front wheels of the shopping cart be replaced with the Rocateq wheel that "fits on any cart."[16]

56. By infringing the '540 Patent, Rocateq has caused and will continue to cause Plaintiff Gatekeeper to suffer damages in an amount to be determined at trial, *i.e.*, in an amount that cannot be less than would constitute a reasonable royalty for

[16] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].

the use of the patented technology, together with pre-judgment and post-judgment interest thereon.

57. On information and belief, Rocateq has infringed, and continues to infringe, the '540 Patent with full knowledge of the patent and its scope, and Rocateq's infringement of the '540 Patent is intentional, knowing, and willful. Rocateq's conduct entitles Gatekeeper to an award of enhanced damages pursuant to 35 U.S.C. § 284 and attorneys' fees pursuant to 35 U.S.C. § 285.

58. Rocateq's infringement has caused and is causing irreparable harm and monetary damages to Gatekeeper and will continue to do so until and unless Rocateq is enjoined and restrained by the Court.

SECOND CAUSE OF ACTION

INFRINGEMENT OF U.S. PATENT NO. 9,091,551

59. Gatekeeper incorporates and realleges each of the allegations contained in paragraphs 1 through 58 of this Complaint as if fully set forth herein.

60. Rocateq is not licensed under the '551 Patent and has no other right or permission to practice the inventions claimed therein.

61. On information and belief, Rocateq has infringed and continues to infringe, directly (alone or jointly), literally, and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271, one or more claims of the '551 Patent by performing, without authority, one or more of the following acts: making, having made, using, importing, selling, and offering for sale in the United States one or more products or services that embody the invention claimed in the '551 Patent, including but not limited to the Rocateq Check Out Security system. Since at least after receiving notice of the '551 Patent, Rocateq has knowingly infringed, and continues to infringe, one or more claims of the '551 Patent by making, having made, using, importing, selling, and offering for sale in the United States the Rocateq Check Out Security system, which products constitute a material part of the invention and are not staple articles or commodities of commerce suitable for

substantial non-infringing use.

62. The Rocateq Check Out Security system embodies the patented invention of the '551 Patent and infringes at least Claims 17 and 18 of the '551 Patent.

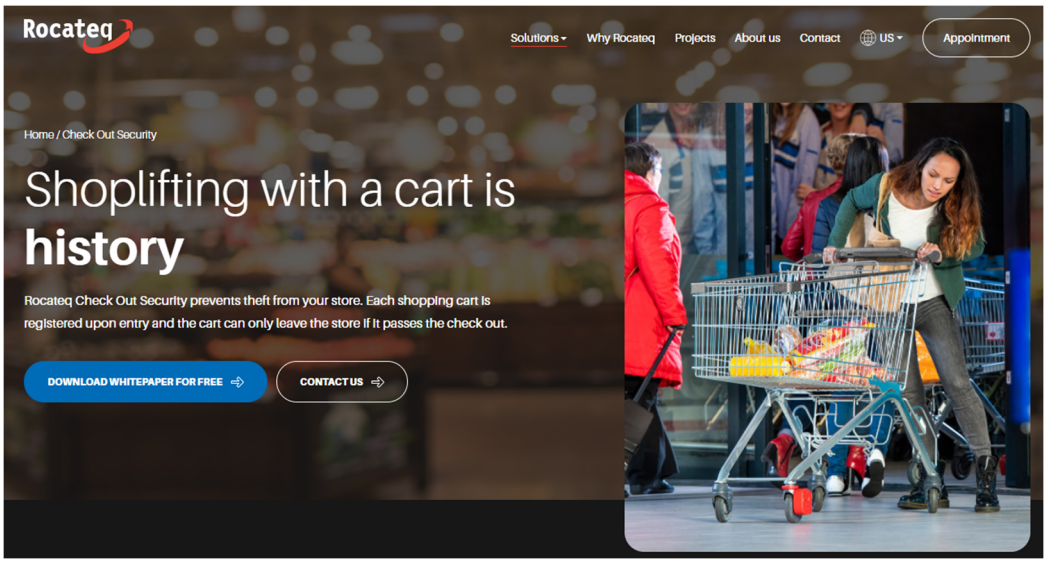
63. For example, Rocateq's Check Out Security system comprises:

> "17. A locking system for disabling a vehicle to prevent its removal from a defined area, the locking system comprising:
>
> a braking mechanism mounted on the vehicle to inhibit movement of the vehicle when the braking mechanism is activated;
>
> a first receiver mounted on the vehicle for receiving a first signal;
>
> a second receiver mounted on the vehicle for receiving a second signal; and
>
> a controller connected to the first receiver, to the second receiver and to the braking mechanism, said controller configured to receive the first and second signals and to selectively activate the braking mechanism in response thereto;
>
> wherein the first receiver is a Very Low Frequency (VLF) receiver configured to detect a VLF signal, and the second receiver is a radio frequency (RF) transceiver that communicates

over a wireless data link."[17]

"18. A system as recited in claim 17, wherein the controller is configured to determine, based on information received over the wireless data link via the radio frequency transceiver, whether to respond to detection of a VLF signal received with the VLF receiver by activating the braking mechanism."[18]

64. As explained on Rocateq's website and in documents describing Rocateq's system, Rocateq's COS system is designed for locking a vehicle (a shopping cart) to prevent the vehicle from being removed from a store:

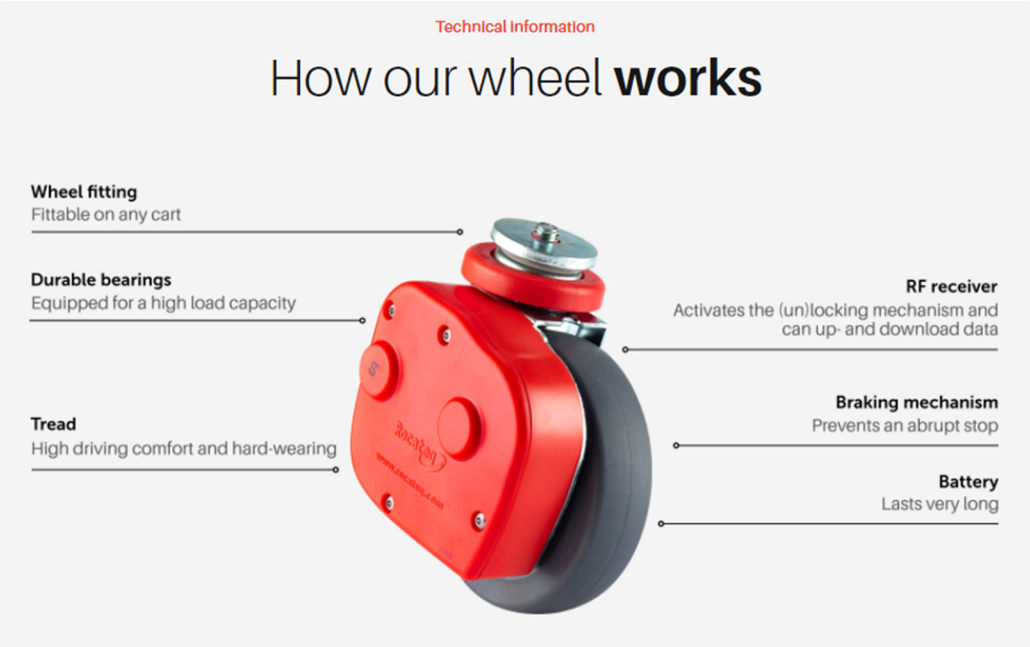


"Rocateq Check Out Security prevents theft from your store. Each shopping cart is registered upon entry and the cart can only leave the store if it passes the check out."[19]

65. Rocateq's COS system includes a wheel that is mounted on the

[17] '551 Patent, Claim 17.
[18] '551 Patent, Claim 18.
[19] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].

shopping cart. As shown below, the wheel includes a braking mechanism. When activated, the braking mechanism inhibits movement of the shopping cart.[20]

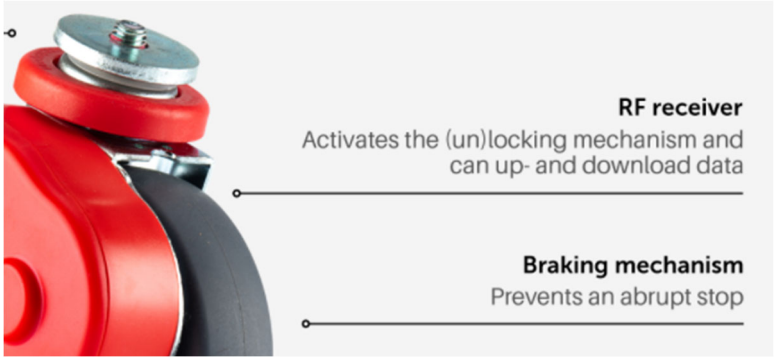


66. Rocateq's wheel includes a receiver that receives, at a store entrance and/or exit, a first signal (an 8 KHz signal, also called an "A" signal) from an "Intellibox," as shown below from a Rocateq FCC filing:[21]

> 31 Intellibox emits A signal (8.13KHz), C signal (8.13KHz), H signal (8.13KHz), and receives alarm signal (2.4 GHHz). Relevant shopping cart casters receive two A signals (8.13KHz) and lock. Intellibox receives alarm signal and will alarm.

67. Rocateq's wheel also includes an RF receiver, as shown below.

[20] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].
[21] https://fcc.report/FCC-ID/2AGTS-INTELLIBOX/4634205.pdf [last checked Nov. 14, 2022].



68. The RF receiver receives, at a checkout lane, a second signal (a 2.4 GHz signal, also called a "B" signal) from a Checkout Transmitter (also called a "Wireless 2.4 GHz transmitter"):[22]

> 3.1. The B signal (2.4 GHz) emitted by Wireless 2.4 GHz transmitter makes the relevant shopping cart casters unlock after receiving A signal (8.13KHz) again.

69. Rocateq's wheel receives the "A" signal and the "B" signal. Rocateq's wheel selectively activates the brake mechanism in response to receipt of the "A" signal unless the "B" signal has been received. Thus, Rocateq's wheel includes a controller configured to receive the first and second signals and to selectively activate the braking mechanism in response thereto.[23]

70. Rocateq's summary of operation of the COS system also describes a controller configured to receive the first and second signals and to selectively activate the braking mechanism in response thereto.[24]

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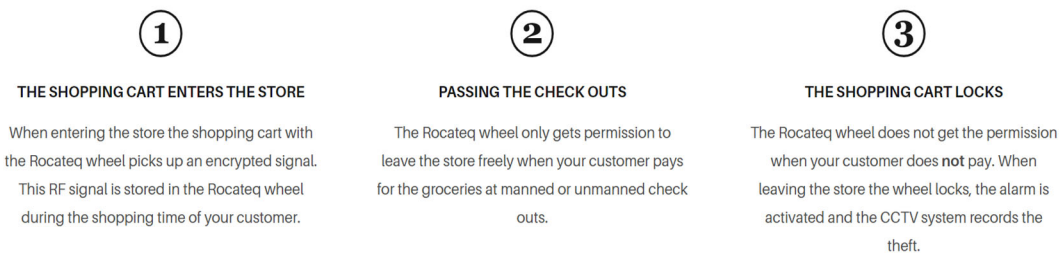
[22] https://fcc.report/FCC-ID/2AGTS-TRANSMITTER/4627456 [last checked Nov. 14, 2022].

[23] https://fcc.report/FCC-ID/2AGTS-TRANSMITTER/4627456 [last checked Nov. 14, 2022]; https://fcc.report/FCC-ID/2AGTS-INTELLIBOX/4634205.pdf [last checked Nov. 14, 2022].

[24] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].



71. Rocateq's wheel has a receiver that receives the 8 KHz "A" signal transmitted from the Intellibox. An 8 KHz signal is a VLF (very low frequency) signal, which is a signal in the range of around 3 KHz to around 30 KHz. See "Rec. ITU-R V.431-7 Nomenclature of the Frequency and Wavelength Bands Used in Telecommunications."[25]

TABLE 1

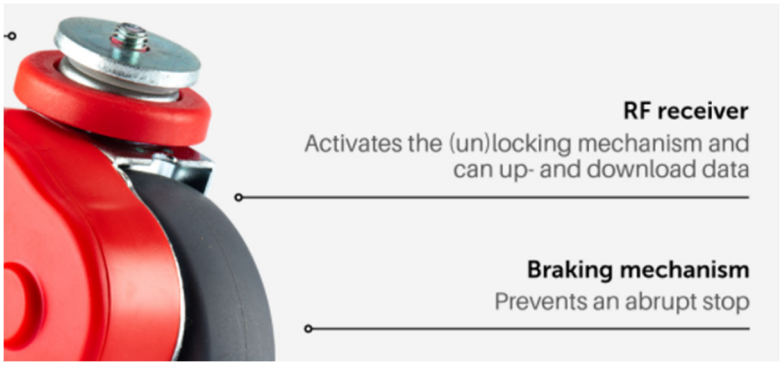
Band number	Symbols	Frequency range (lower limit exclusive, upper limit inclusive)	Corresponding metric subdivision	Metric abbreviations for the bands
3	ULF	300-3 000 Hz	Hectokilometric waves	B.hkm
4	VLF	3-30 kHz	Myriametric waves	B.Mam

72. The '551 patent expressly indicates that the VLF receiver may be an 8 KHz receiver. *See* '551 Patent, 12:7-10.

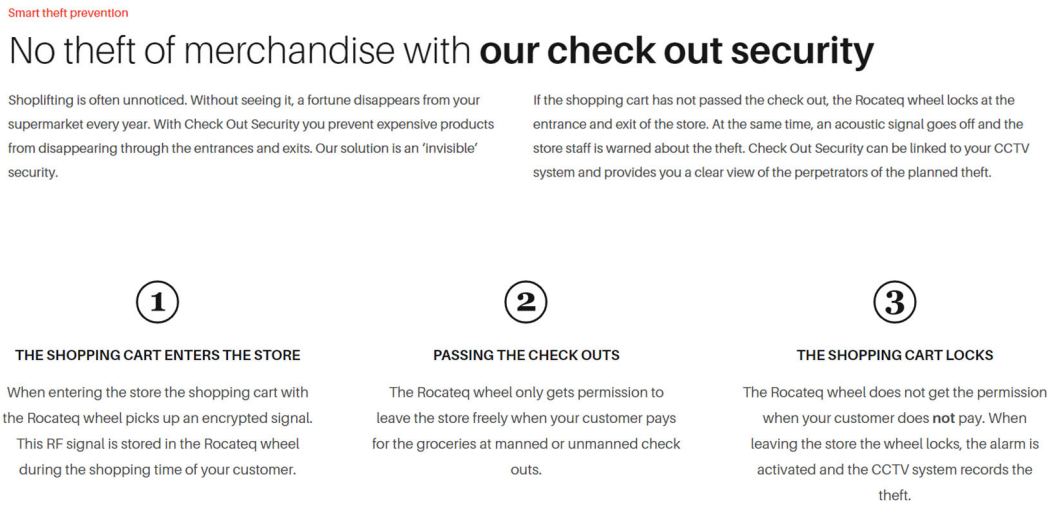
73. Rocateq's wheel has a receiver that receives the 2.4 GHz "B" signal transmitted from the Checkout Transmitter and transmits a 2.4 GHz alarm signal. A 2.4 GHz signal is an RF signal. The '551 patent expressly indicates that the RF transceiver may be a 2.4GHz transceiver. *See* '551 Patent, 11:56-58.

74. Rocateq's wheel "can up- and download data,"[26] which indicates the existence of a wireless data link. Thus, the RF transceiver in Rocateq's wheel communicates over a wireless data link.

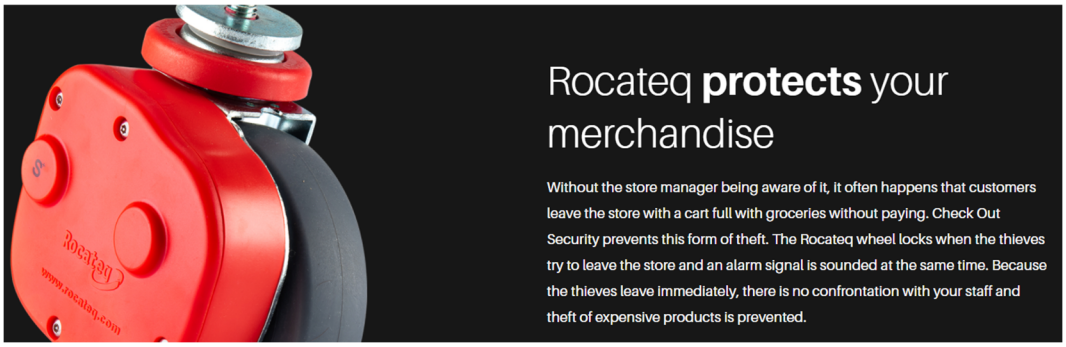
[25] https://web.archive.org/web/20131031020427/http://www.itu.int/dms_pubrec/itu-r/rec/v/R-REC-V.431-7-200005-I%21%21PDF-E.pdf. [last checked Oct. 6, 2022].
[26] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].



75. Rocateq's wheel includes circuity that determines, based on whether the RF transceiver has received the 2.4 GHz "B" signal from the Checkout Transmitter, whether to respond to detection by the VLF receiver of the 8 KHz "A" signal near the store exit by activating the braking mechanism, as described below. Thus, the controller in Rocateq's wheel is configured to determine, based on information received over the wireless data link via the RF transceiver, whether to respond to detection of a VLF signal received with the VLF receive by activating the braking mechanism.[27]



[27] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].



76. On information and belief, Rocateq has infringed and continues to infringe indirectly by way of inducement and contributory infringement, literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271, one or more claims of the '551 Patent by performing, without authority, one or more of the following acts: making, having made, using, importing, selling, and offering for sale in the United States one or more products or services that embody the invention claimed in the '551 Patent, including but not limited to Rocateq's COS system, and encouraging and instructing its customers, end-users, partners, and third parties to make and/or use the COS system in a manner that directly infringes the '551 Patent. Rocateq additionally contributes to and induces direct infringement by its customers, end-users, partners, and other third parties by instructing and encouraging them to make and/or use the COS system in a manner that directly infringes at least one claim of the '551 Patent.

77. Since receiving notice of the '551 Patent, Rocateq has knowingly contributed to the direct infringement of and induced direct infringement of, and continues to knowingly contribute to the direct infringement of and induce direct infringement of, one or more claims of the '551 Patent by its customers, end-users, partners, and third parties with specific intent that the COS system be made and/or used by its customers, end-users, partners, and third parties to directly infringe the '551 Patent, which products constitute a material part of the invention and are not

staple articles or commodities of commerce suitable for substantial non-infringing use.

78. Rocateq instructs and encourages its customers, end-users, partners, and third parties to configure and to use the COS system in a manner that directly infringes at least Claims 17 and 18 of the '551 Patent as described above. See also generally https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].

79. Rocateq further provides information and technical support on its website (e.g., www.rocateq.com) that instructs and encourages customers, end-users, partners, and third parties on how to use the Rocateq COS system, and thereby induces and contributes to direct infringement by its customers, end-users, partners, and third parties.

80. In each case, the information and materials provided by Rocateq contain detailed descriptions and instructions for making and using the system claimed in at least Claims 17 and 18 of the '551 Patent including, at least, that Rocateq requires that one of the front wheels of the shopping cart be replaced with the Rocateq wheel "[that] fits on any cart."[28]

81. By infringing the '551 Patent, Rocateq has caused and will continue to cause Plaintiff Gatekeeper to suffer damages in an amount to be determined at trial, *i.e.*, in an amount that cannot be less than would constitute a reasonable royalty for the use of the patented technology, together with pre-judgment and post-judgment interest thereon.

82. On information and belief, Rocateq has infringed, and continues to infringe, the '551 Patent with full knowledge of the patent and its scope, and Rocateq's infringement of the '551 Patent is intentional, knowing, and willful. Rocateq's conduct entitles Gatekeeper to an award of enhanced damages pursuant to 35 U.S.C. § 284 and attorneys' fees pursuant to 35 U.S.C. § 285.

[28] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].

83. Rocateq's infringement has caused and is causing irreparable harm and monetary damages to Gatekeeper and will continue to do so until and unless Rocateq is enjoined and restrained by the Court.

THIRD CAUSE OF ACTION

INFRINGEMENT OF U.S. PATENT NO. 9,637,151

84. Gatekeeper incorporates and realleges each of the allegations contained in paragraphs 1 through 83 of this Complaint as if fully set forth herein.

85. Rocateq is not licensed under the '151 Patent and has no other right or permission to practice the inventions claimed therein.

86. On information and belief, Rocateq has infringed and continues to infringe, directly (alone or jointly), literally, and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271, one or more claims of the '151 Patent by performing, without authority, one or more of the following acts: making, having made, using, importing, selling, and offering for sale in the United States one or more products or services that embody the invention claimed in the '151 Patent, including but not limited to the Rocateq Check Out Security system. Since at least after receiving notice of the '151 Patent, Rocateq has knowingly infringed, and continues to infringe, one or more claims of the '151 Patent by making, having made, using, importing, selling, and offering for sale in the United States the Rocateq Check Out Security system, which products constitute a material part of the invention and are not staple articles or commodities of commerce suitable for substantial non-infringing use.

87. The Rocateq Check Out Security system embodies the patented invention of the '151 Patent and infringes at least Claim 15 of the '151 Patent.

88. For example, Rocateq's Check Out Security system comprises:

> "15. A system for detecting unauthorized exits of shopping baskets from a store, the system comprising:

a plurality of transceivers, each transceiver attached to a respective shopping basket, each transceiver including a wireless communication unit and a controller;

a plurality of signal emitters, each signal emitter corresponding to a respective one of a plurality of checkout areas of the store, each signal emitter positioned relative to the respective checkout area to enable the transceivers to detect entry of the respective shopping baskets into the checkout area; and

a monitoring unit that communicates bi-directionally with the transceivers; wherein the transceivers are configured to:
use signals emitted by the signal emitters to detect entry of the corresponding shopping baskets into the checkout areas; and

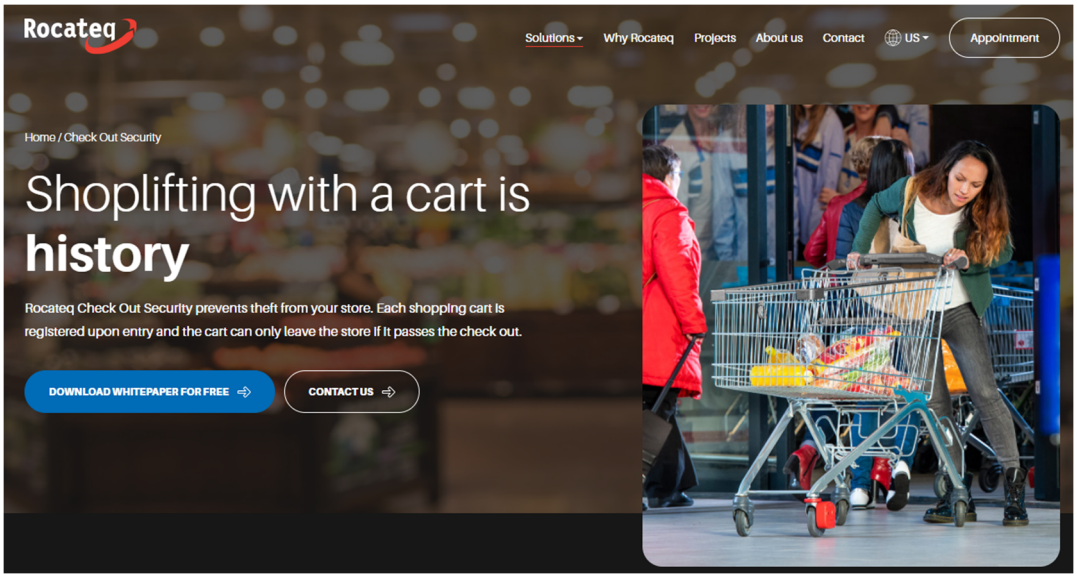
transmit, to the monitoring unit, information indicative of whether the transceiver has detected entry into one of the checkout areas; and
wherein the system is configured to:

monitor a location history indicating that a particular one of the shopping baskets is in the general vicinity of the checkout area; and

determine, based at least in part on the location history, whether the particular one of the shopping baskets is authorized to exit

the store."[29]

89. As explained on Rocateq's website and in documents describing Rocateq's system, Rocateq's COS system detects unauthorized exits of shopping baskets (which are part of shopping carts) from a store:



"Rocateq Check Out Security prevents theft from your store. Each shopping cart is registered upon entry and the cart can only leave the store if it passes the check out."[30]

90. Rocateq's COS system includes wheels that are attached to respective shopping baskets. Each wheel includes an RF receiver. As discussed in Rocateq's FCC filings[31] (see below in connection with the Checkout Transmitter and Intellibox), the wheel unit includes a transceiver that receives and transmits 2.4 GHz signals. The wheel includes a wireless communication unit and controller.[32]

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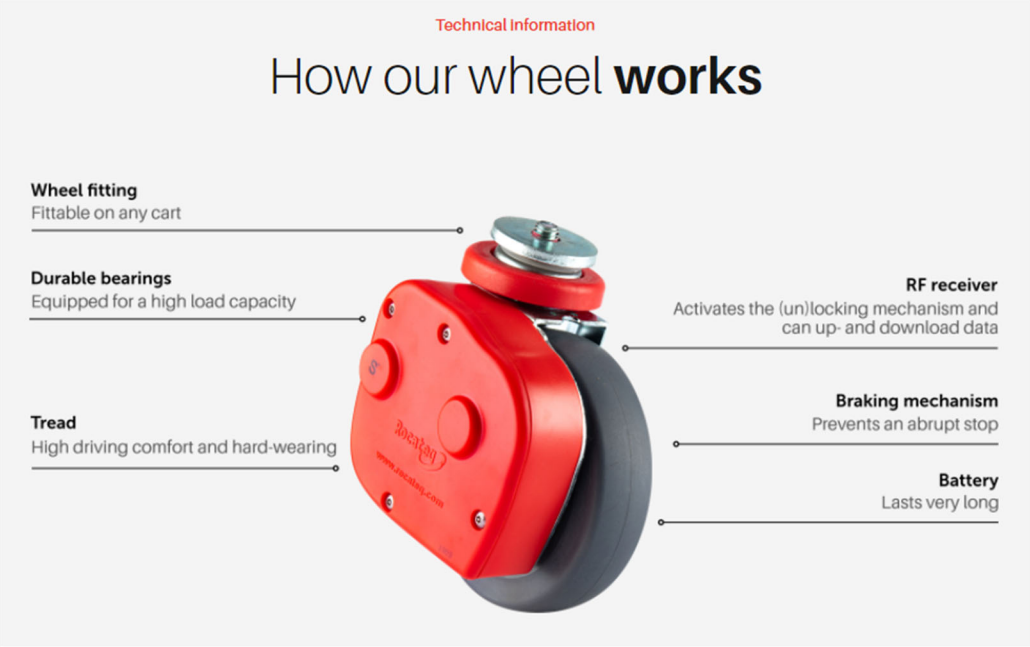
[29] '151 Patent, Claim 1.
[30] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].
[31] https://fcc.report/FCC-ID/2AGTS-TRANSMITTER/4627456 [last checked Nov. 14, 2022]; https://fcc.report/FCC-ID/2AGTS-INTELLIBOX/4634205.pdf [last checked Nov. 14, 2022].
[32] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].



91. Rocateq's COS system includes multiple Checkout Transmitters (also called a "Wireless 2.4 GHz transmitter"), each positioned at a respective checkout area of the store. An example is pictured below:

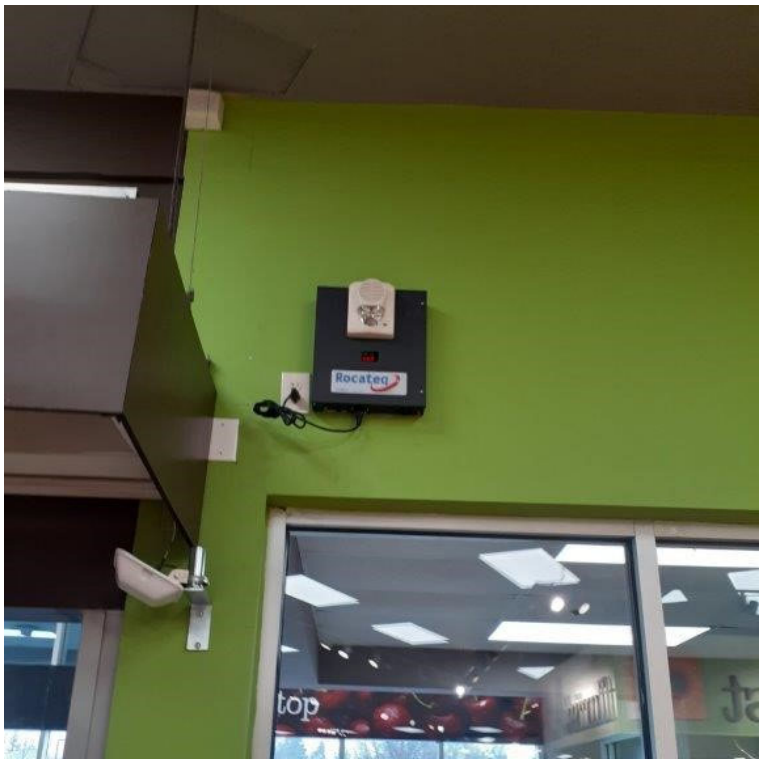
92. Each Checkout Transmitter emits a 2.4 GHz signal (also called a "B" signal, below) for the transceiver to detect entry of the shopping baskets into the checkout area.[33]

[33] https://fcc.report/FCC-ID/2AGTS-TRANSMITTER/4627456 [last checked Nov. 14, 2022].

> 3.1. The B signal (2.4 GHz) emitted by Wireless 2.4 GHz transmitter makes the relevant shopping cart casters unlock after receiving A signal (8.13KHz) again.

93. Thus, each Checkout Transmitter is positioned relative to the respective checkout area to enable the transceivers to detect entry of the respective shopping baskets into the checkout area.

94. Rocateq's COS system includes an "Intellibox," an example of which is pictured below:

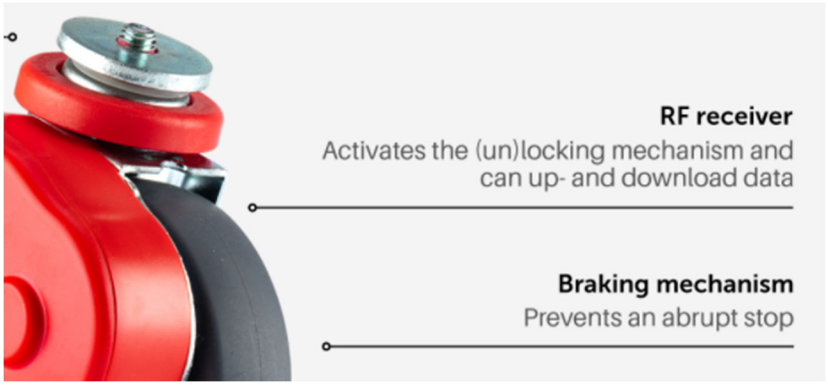


95. The Intellibox transmits an 8 KHz signal (also called an "A" signal) to the wheel and receives a 2.4 GHz alarm signal from the wheel, and thus communicates bi-directionally with the transceivers, as described below in a Rocateq FCC filing.[34]

[34] https://fcc.report/FCC-ID/2AGTS-INTELLIBOX/4634205.pdf [last checked Nov. 14, 2022].

> 31 Intellibox emits A signal (8.13KHz), C signal (8.13KHz), H signal (8.13KHz), and receives alarm signal (2.4 GHHz). Relevant shopping cart casters receive two A signals (8.13KHz) and lock. Intellibox receives alarm signal and will alarm.

96. Rocateq's wheels can "up- and download data," further demonstrating the bi-directional communication functionality of the COS system.



97. Rocateq's wheel uses receipt of the "B" signal to detect entry of the shopping basket into the checkout area.[35]

> 3.1. The B signal (2.4 GHz) emitted by Wireless 2.4 GHz transmitter makes the relevant shopping cart casters unlock after receiving A signal (8.13KHz) again.

98. Step two of Rocateq's summary of operation of the COS system also demonstrates that Rocateq's wheel uses receipt of the "B" signal to detect entry of the shopping basket into the checkout area.[36]

[35] https://fcc.report/FCC-ID/2AGTS-TRANSMITTER/4627456 [last checked Nov. 14, 2022].
[36] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].

PASSING THE CHECK OUTS

The Rocateq wheel only gets permission to leave the store freely when your customer pays for the groceries at manned or unmanned check outs.

99. Rocateq's wheel transmits to the Intellibox an alarm signal indicative of the wheel not having detected entry into one of the checkout areas.[37]

> 31 Intellibox emits A signal (8.13KHz), C signal (8.13KHz), H signal (8.13KHz), and receives alarm signal (2.4 GHHz). Relevant shopping cart casters receive two A signals (8.13KHz) and lock. Intellibox receives alarm signal and will alarm.

100. Rocateq's wheel monitors, by receipt or non-receipt of the "B" signal, whether the wheel has been in a location indicating that a shopping basket is in the general vicinity of the checkout area. The wheel determines, based at least in part on whether the "B" signal has been received, whether the shopping basket is authorized to exit the store, as discussed below.[38]

Smart theft prevention

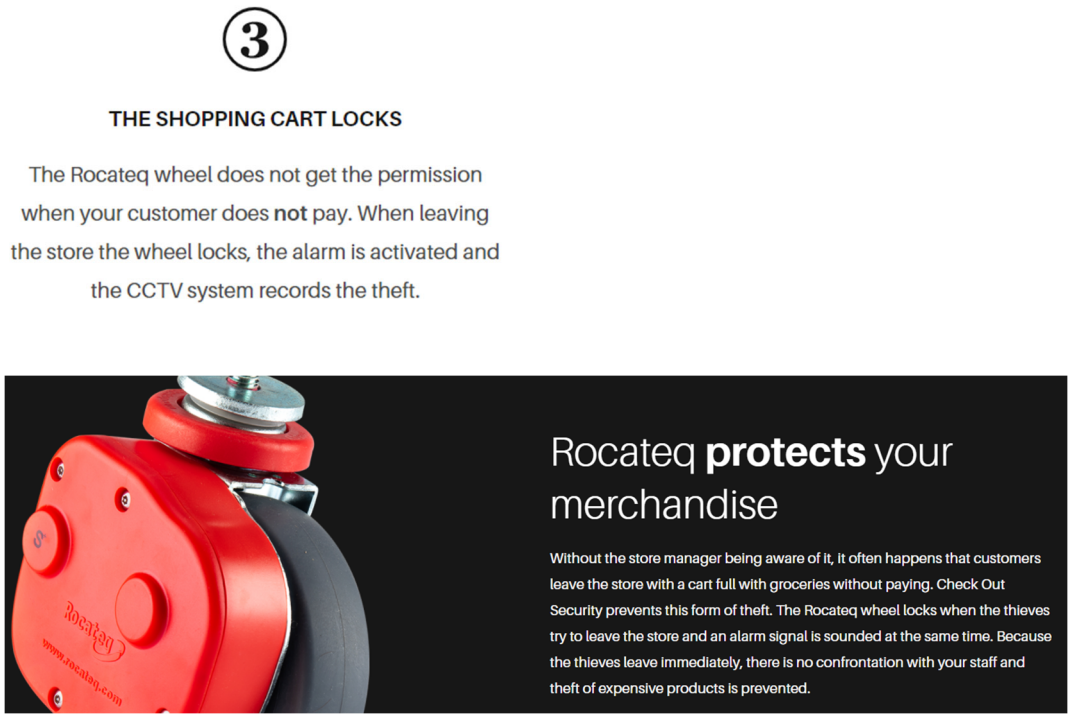
No theft of merchandise with **our check out security**

Shoplifting is often unnoticed. Without seeing it, a fortune disappears from your supermarket every year. With Check Out Security you prevent expensive products from disappearing through the entrances and exits. Our solution is an 'invisible' security.

If the shopping cart has not passed the check out, the Rocateq wheel locks at the entrance and exit of the store. At the same time, an acoustic signal goes off and the store staff is warned about the theft. Check Out Security can be linked to your CCTV system and provides you a clear view of the perpetrators of the planned theft.

[37] https://fcc.report/FCC-ID/2AGTS-INTELLIBOX/4634205.pdf [last checked Nov. 14, 2022].

[38] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].



101. On information and belief, Rocateq has infringed and continues to infringe indirectly by way of inducement and contributory infringement, literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271, one or more claims of the '151 Patent by performing, without authority, one or more of the following acts: making, having made, using, importing, selling, and offering for sale in the United States one or more products or services that embody the invention claimed in the '151 Patent, including but not limited to Rocateq's COS system, and encouraging and instructing its customers, end-users, partners, and third parties to make and/or use the COS system in a manner that directly infringes the '151 Patent. Rocateq additionally contributes to and induces direct infringement by its customers, end-users, partners, and other third parties by instructing and encouraging them to make and/or use the COS system in a manner that directly infringes at least one claim of the '151 Patent.

102. Since receiving notice of the '151 Patent, Rocateq has knowingly contributed to the direct infringement of and induced direct infringement of, and

continues to knowingly contribute to the direct infringement of and induce direct infringement of, one or more claims of the '151 Patent by its customers, end-users, partners, and third parties with specific intent that the COS system be made and/or used by its customers, end-users, partners, and third parties to directly infringe the '151 Patent, which products constitute a material part of the invention and are not staple articles or commodities of commerce suitable for substantial non-infringing use.

103. Rocateq instructs and encourages its customers, end-users, partners, and third parties to configure and to use the COS system in a manner that directly infringes at least Claim 15 of the '151 Patent as described above. See also generally https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].

104. Rocateq further provides information and technical support on its website (e.g., www.rocateq.com) that instructs and encourages customers, end-users, partners, and third parties on how to use the Rocateq COS system, and thereby induces and contributes to direct infringement by its customers, end-users, partners, and third parties.

105. In each case, the information and materials provided by Rocateq contain detailed descriptions and instructions for making and using the system claimed in at least Claim 15 of the '151 Patent including, at least, that Rocateq requires that one of the front wheels of the shopping cart be replaced with the Rocateq wheel "[that] fits on any cart."[39]

106. By infringing the '151 Patent, Rocateq has caused and will continue to cause Plaintiff Gatekeeper to suffer damages in an amount to be determined at trial, *i.e.*, in an amount that cannot be less than would constitute a reasonable royalty for the use of the patented technology, together with pre-judgment and post-judgment interest thereon.

[39] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].

107. On information and belief, Rocateq has infringed, and continues to infringe, the '151 Patent with full knowledge of the patent and its scope, and Rocateq's infringement of the '151 Patent is intentional, knowing, and willful. Rocateq's conduct entitles Gatekeeper to an award of enhanced damages pursuant to 35 U.S.C. § 284 and attorneys' fees pursuant to 35 U.S.C. § 285.

108. Rocateq's infringement has caused and is causing irreparable harm and monetary damages to Gatekeeper and will continue to do so until and unless Rocateq is enjoined and restrained by the Court.

FOURTH CAUSE OF ACTION

INFRINGEMENT OF U.S. PATENT NO. 11,230,313

109. Gatekeeper incorporates and realleges each of the allegations contained in paragraphs 1 through 108 of this Complaint as if fully set forth herein.

110. Rocateq is not licensed under the '313 Patent and has no other right or permission to practice the inventions claimed therein.

111. On information and belief, Rocateq has infringed and continues to infringe, directly (alone or jointly), literally, and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271, one or more claims of the '313 Patent by performing, without authority, one or more of the following acts: making, having made, using, importing, selling, and offering for sale in the United States one or more products or services that embody the invention claimed in the '313 Patent, including but not limited to the Rocateq Check Out Security system. Since receiving notice of the '313 Patent, Rocateq has knowingly infringed, and continues to infringe, one or more claims of the '313 Patent by making, having made, using, importing, selling, and offering for sale in the United States the Rocateq Check Out Security system, which products constitute a material part of the invention and are not staple articles or commodities of commerce suitable for substantial non-infringing use.

112. The Rocateq Check Out Security ("COS") system embodies the

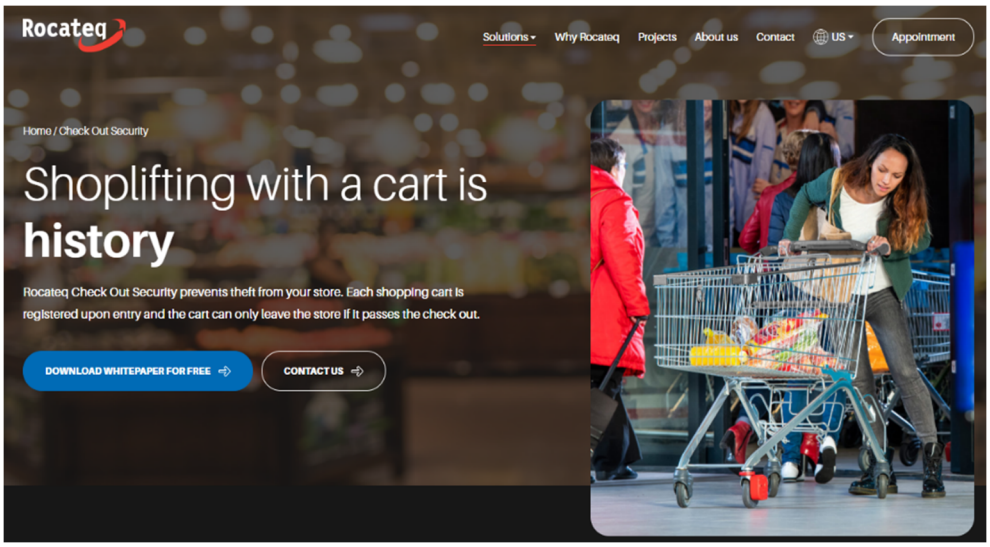
patented invention of the '313 Patent and infringes at least Claim 1 of the '313 Patent.

113. For example, Rocateq's Check Out Security system comprises:

> "1. A shopping cart wheel assembly configured to attach to a shopping cart to enable usage of the shopping cart to be monitored and controlled, the shopping cart wheel assembly comprising:
>
> a wheel;
>
> a brake capable of being activated to inhibit rotation of the wheel;
>
> a controller configured to control the brake;
>
> a very low frequency (VLF) receiver coupled to the controller; and
>
> a radio frequency (RF) transceiver coupled to the controller, the RF transceiver configured to send and receive data in a 2.4 GHz frequency band;
>
> wherein the controller is configured to determine whether to activate the brake in response to detection of a VLF signal by the VLF receiver based at least partly on content of RF transmissions received by the RF transceiver."[40]

[40] '313 Patent, Claim 1.

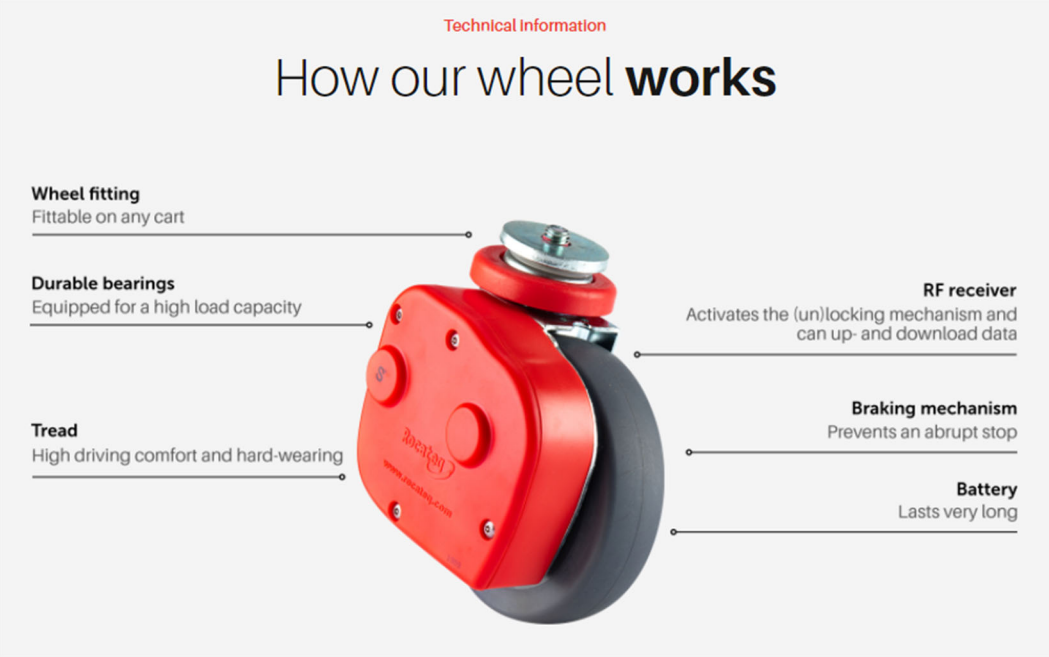
114. As explained on Rocateq's website and in documents describing Rocateq's system, Rocateq's COS system comprises a shopping cart wheel assembly configured to attach to a shopping cart to enable usage of the shopping cart to be monitored and controlled:



> "Rocateq Check Out Security prevents theft from your store. Each shopping cart is registered upon entry and the cart can only leave the store if it passes the check out."[41]

115. Rocateq's COS system includes a shopping cart wheel assembly comprising a brake capable of being activated to inhibit rotation of the wheel, as shown below.[42]

[41] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].
[42] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].



43

116. Rocateq's COS system includes a shopping cart wheel assembly comprising a controller configured to control the brake as the controller is coupled to the braking mechanism, detects signals that reflect a current location of the shopping cart wheel, and transmits status messages via a wireless RF link, including status messages reflective of the signals detected by the electronic circuitry.

117. Specifically, Rocateq's wheel detects, at a store entrance and exit, an 8 KHz signal (also called an "A" signal) from an "Intellibox."[44]

118. Rocateq's wheel detects, at a checkout lane, a 2.4 GHz signal (also called a "B" signal) from a Checkout Transmitter (also called a "Wireless 2.4 GHz transmitter").[45]

119. Rocateq's wheel transmits, near the store exit, a 2.4 GHz alarm signal

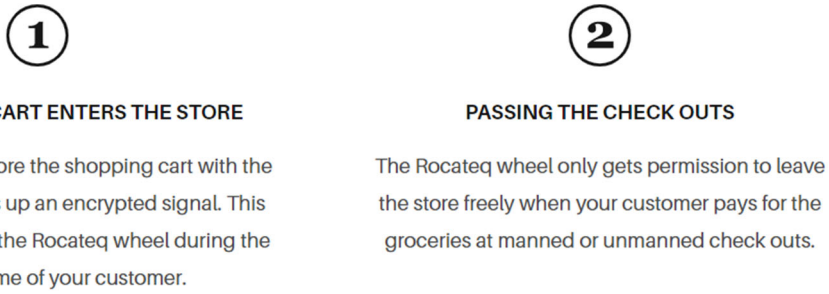
[43] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].
[44] https://fcc.report/FCC-ID/2AGTS-INTELLIBOX/4634205.pdf [last checked Nov. 14, 2022].
[45] https://fcc.report/FCC-ID/2AGTS-TRANSMITTER/4627456 [last checked Nov. 14, 2022].

to the Intellibox.[46] The alarm signal is a status signal reflective of the wheel detecting a particular sequence of signals.

120. Operation of Rocateq's wheel is discussed in Rocateq's FCC filings for the Checkout Transmitter and Intellibox[47]:

> 3.1. The B signal (2.4 GHz) emitted by Wireless 2.4 GHz transmitter makes the relevant shopping cart casters unlock after receiving A signal (8.13KHz) again.
>
> 31 Intellibox emits A signal (8.13KHz), C signal (8.13KHz), H signal (8.13KHz), and receives alarm signal (2.4 GHHz). Relevant shopping cart casters receive two A signals (8.13KHz) and lock. Intellibox receives alarm signal and will alarm.

121. Rocateq also disclosed the operation of its wheel on the Rocateq website - see the first two steps of the system's operational summary[48]:



122. Rocateq's wheel comprises a very low frequency (VLF) receiver coupled to the controller; it receives the 8 KHz signal, which is a VLF signal transmitted from the Intellibox described above. A VLF (very low frequency) signal is in the range of about 3 KHz to about 30 KHz. See "Rec. ITU-R V.431-7

[46] https://fcc.report/FCC-ID/2AGTS-INTELLIBOX/4634205.pdf [last checked Nov. 14, 2022].
[47] https://fcc.report/FCC-ID/2AGTS-TRANSMITTER/4627456 [last checked Nov. 14, 2022]; https://fcc.report/FCC-ID/2AGTS-INTELLIBOX/4634205.pdf [last checked Nov. 14, 2022].
[48] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].

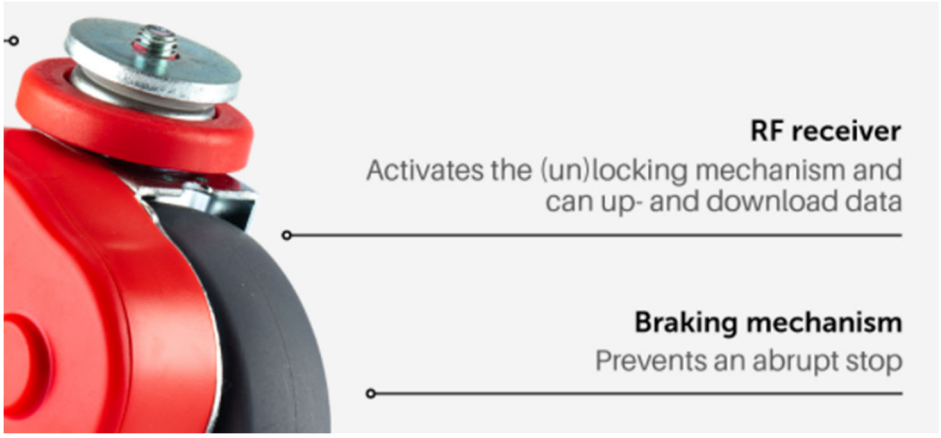
Nomenclature of the Frequency and Wavelength Bands Used in Telecommunications."[49]

TABLE 1

Band number	Symbols	Frequency range (lower limit exclusive, upper limit inclusive)	Corresponding metric subdivision	Metric abbreviations for the bands
3	ULF	300-3 000 Hz	Hectokilometric waves	B.hkm
4	VLF	3-30 kHz	Myriametric waves	B.Mam

123. The '313 patent expressly indicates that the VLF receiver may be an 8 KHz receiver. *See* '313 Patent, 12:66-13:2.

124. Rocateq's wheel comprises a radio frequency (RF) transceiver coupled to the controller, the RF transceiver configured to send and receive data in a 2.4 GHz frequency band.[50] As shown below, Rocateq's wheel "can up- and download data."[51]

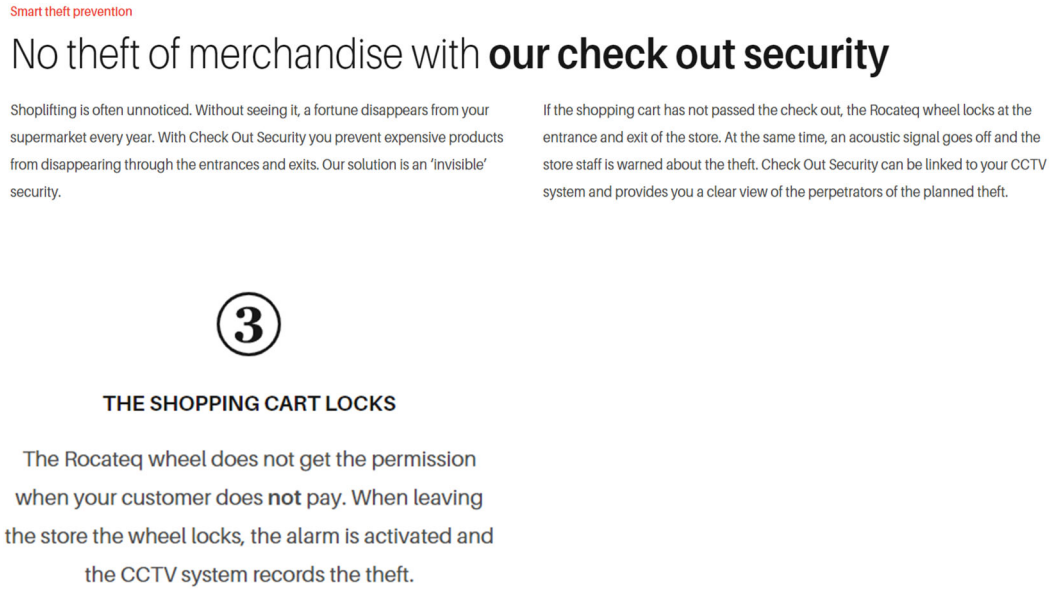


[49] https://web.archive.org/web/20131031020427/http://www.itu.int/dms_pubrec/itu-r/rec/v/R-REC-V.431-7-200005-I%21%21PDF-E.pdf. [last checked Oct. 6, 2022].
[50] https://fcc.report/FCC-ID/2AGTS-TRANSMITTER/4627456 [last checked Nov. 14, 2022]; https://fcc.report/FCC-ID/2AGTS-INTELLIBOX/4634205.pdf [last checked Nov. 14, 2022].

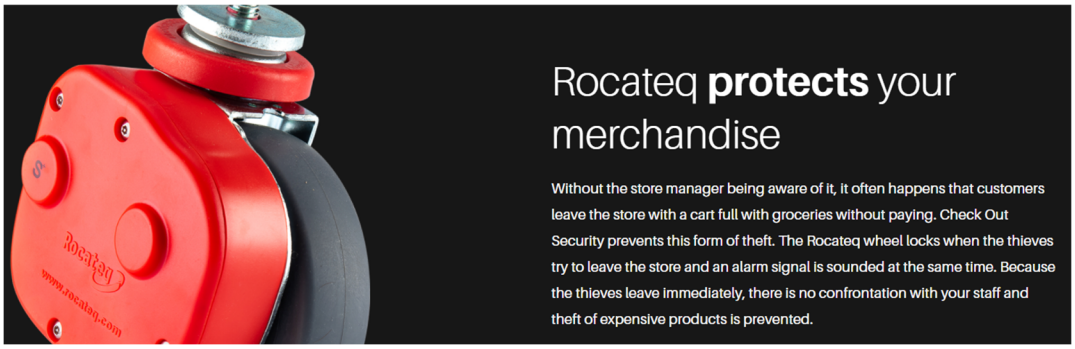
[51] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].

125. Rocateq's wheel comprises a controller that is configured to determine whether to activate the brake in response to detection of a VLF signal by the VLF receiver based at least partly on content of RF transmissions received by the RF transceiver.

126. Specifically, Rocateq's wheel determines, based on whether the 2.4 GHz signal from the Checkout Transmitter has been received, whether to respond to detection of the 8 KHz signal near the store exit by activating the braking mechanism, as shown below.[52] [53]



[52] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].
[53] https://fcc.report/FCC-ID/2AGTS-TRANSMITTER/4627456 [last checked Nov. 14, 2022]; https://fcc.report/FCC-ID/2AGTS-INTELLIBOX/4634205.pdf [last checked Nov. 14, 2022].



127. On information and belief, Rocateq has infringed and continues to infringe indirectly by way of inducement and contributory infringement, literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271, one or more claims of the '313 Patent by performing, without authority, one or more of the following acts: making, having made, using, importing, selling, and offering for sale in the United States one or more products or services that embody the invention claimed in the '313 Patent, including but not limited to Rocateq's COS system, and encouraging and instructing its customers, end-users, partners, and third parties to make and/or use the COS system in a manner that directly infringes the '313 Patent. Rocateq additionally contributes to and induces direct infringement by its customers, end-users, partners, and other third parties by instructing and encouraging them to make and/or use the COS system in a manner that directly infringes at least one claim of the '313 Patent.

128. Since receiving notice of the '313 Patent, Rocateq has knowingly contributed to the direct infringement of and induced direct infringement of, and continues to knowingly contribute to the direct infringement of and induce direct infringement of, one or more claims of the '313 Patent by its customers, end-users, partners, and third parties with specific intent that the COS system be made and/or used by its customers, end-users, partners, and third parties to directly infringe the '313 Patent, which products constitute a material part of the invention and are not staple articles or commodities of commerce suitable for substantial non-infringing use.

129. Rocateq instructs and encourages its customers, end-users, partners, and third parties to configure and to use the COS system in a manner that directly infringes at least Claim 1 of the '313 Patent as described above. See also generally https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].

130. Rocateq further provides information and technical support on its website (e.g., www.rocateq.com) that instructs and encourages customers, end-users, partners, and third parties on how to use the Rocateq COS system, and thereby induces and contributes to direct infringement by its customers, end-users, partners, and third parties.

131. In each case, the information and materials provided by Rocateq contain detailed descriptions and instructions for making and using the system claimed in at least Claim 1 of the '313 Patent including, at least, that Rocateq requires that one of the front wheels of the shopping cart be replaced with the Rocateq wheel "[that] fits on any cart."[54]

132. By infringing the '313 Patent, Rocateq has caused and will continue to cause Plaintiff Gatekeeper to suffer damages in an amount to be determined at trial, *i.e.*, in an amount that cannot be less than would constitute a reasonable royalty for the use of the patented technology, together with pre-judgment and post-judgment interest thereon.

133. On information and belief, Rocateq has infringed, and continues to infringe, the '313 Patent with full knowledge of the patent and its scope, and Rocateq's infringement of the '313 Patent is intentional, knowing, and willful. Rocateq's conduct entitles Gatekeeper to an award of enhanced damages pursuant to 35 U.S.C. § 284 and attorneys' fees pursuant to 35 U.S.C. § 285.

134. Rocateq's infringement has caused and is causing irreparable harm and monetary damages to Gatekeeper and will continue to do so until and unless

[54] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].

Rocateq is enjoined and restrained by the Court.

FIFTH CAUSE OF ACTION

INFRINGEMENT OF U.S. PATENT NO. 9,845,072

135. Gatekeeper incorporates and realleges each of the allegations contained in paragraphs 1 through 134 of this Complaint as if fully set forth herein.

136. Rocateq is not licensed under the '072 Patent and has no other right or permission to practice the inventions claimed therein.

137. On information and belief, Rocateq has infringed and continues to infringe, directly (alone or jointly), literally, and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271, one or more claims of the '072 Patent by performing, without authority, one or more of the following acts: making, having made, using, importing, selling, and offering for sale in the United States one or more products or services that embody the invention claimed in the '072 Patent, including but not limited to the Rocateq Cart Security system. Since receiving notice of the '072 Patent, Rocateq has knowingly infringed, and continues to infringe, one or more claims of the '072 Patent by making, having made, using, importing, selling, and offering for sale in the United States the Rocateq Cart Security system, which products constitute a material part of the invention and are not staple articles or commodities of commerce suitable for substantial non-infringing use.

138. The Rocateq Cart Security system embodies the patented invention of the '072 Patent and infringes at least Claim 1 of the '072 Patent.

139. For example, Rocateq's Cart Security system comprises:

> "1. A system to detect whether a human-propelled cart having a wheel crosses a boundary, the system comprising:
>
> a cable surrounding a containment area and defining a boundary

of the containment area;

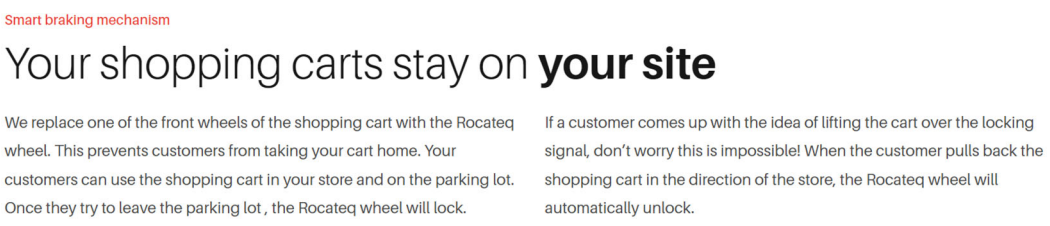
a transmitter electrically connected to the cable and configured to transmit a radio frequency (RF) containment signal to the cable, the containment signal comprising an asymmetric, fluctuating component, the cable thereby generating an asymmetric fluctuating magnetic field having three components; and

the wheel comprising a receiver configured to detect the RF containment signal, the receiver comprising:

a resonant tank circuit having a single inductor configured to measure a single component of the three components of the asymmetric, fluctuating magnetic field, and

a hardware processor programmed to determine a direction of the cart relative to the boundary of the containment area based at least in part on the measured single component of the three components of the asymmetric, fluctuating magnetic field."[55]

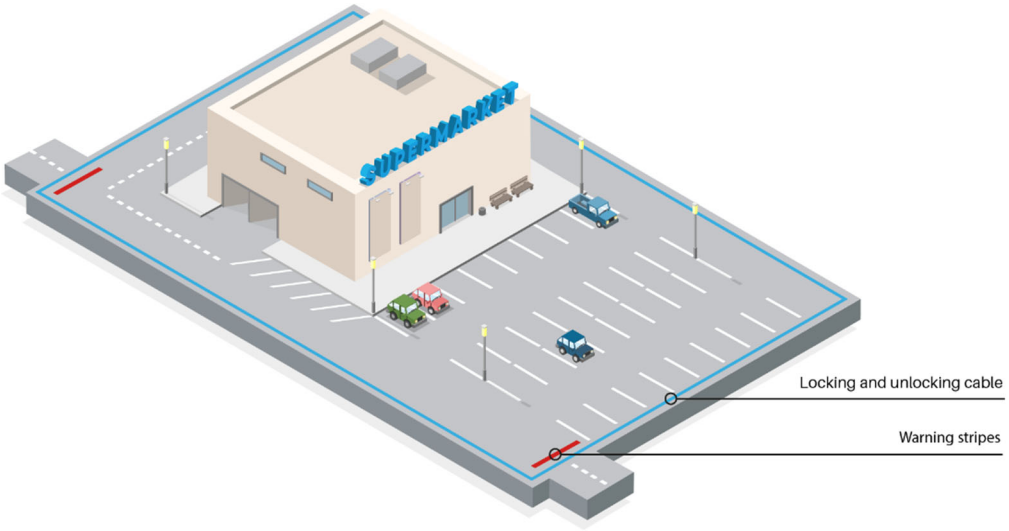
140. As explained on Rocateq's website and in documents describing Rocateq's system, Rocateq's Cart Security system comprises a system to detect whether a human-propelled cart having a wheel crosses a boundary:



[55] '072 Patent, Claim 1.

"We replace one of the front wheels of the shopping cart with the Rocateq wheel. This prevents customers from taking your cart home. Your customers can use the shopping cart in your store and on the parking lot. Once they try to leave the parking lot, the Rocateq wheel will lock."[56]

141. Rocateq's Cart Security system comprises a cable surrounding a containment area and defining a boundary of the containment area. See perimeter "locking and unlocking cable"[57]



142. Rocateq's Cart Security system comprises a transmitter electrically connected to the cable and configured to transmit a radio frequency (RF) containment signal to the cable. See "[w]hen the shopping cart approaches the perimeter of the parking lot the Rocateq wheel picks up the encrypted RF signal" and "[the] locking and unlocking cable is installed underground and activates the braking mechanism of the wheel."[58]

[56] https://rocateq.com/cart-security/ [last checked Nov. 14, 2022].
[57] https://rocateq.com/cart-security/ [last checked Nov. 14, 2022].
[58] https://rocateq.com/cart-security/ [last checked Nov. 14, 2022].

① THE CART APROACHES THE WARNING STRIPES

When the shopping cart approaches the perimeter of the parking lot the Rocateq wheel picks up the encrypted RF signal.

② THE BRAKING MECHANISM IS ACTIVATED

The locking and unlocking cable is installed underground and activates the braking mechanism of the wheel. When the customer moves back in the direction of the store the shopping cart will be released.

143. A Rocateq Cart Security system is implemented at the Grocery Outlet at 3430 W Lincoln Ave, Anaheim, CA 92801. The sign at the location explains the operation of the Rocateq Cart Security system. See "www.rocateq.com" below picture of shopper with cart.

144. In Rocateq's Cart Security system, the containment signal comprises an asymmetric, fluctuating component, the cable thereby generating an asymmetric, fluctuating magnetic field having three components.[59] The magnetic field produced by the current in the cable has three components (Bx, By, Bz).[60]

[59] https://rocateq.com/cart-security/ [last checked Nov. 14, 2022].
[60] See, e.g., S. Hampton, et al, "Closed-form expressions for the magnetic fields of rectangular and circular finite-length solenoids and current loops," available at https://par.nsf.gov/servlets/purl/10220882 at 7.

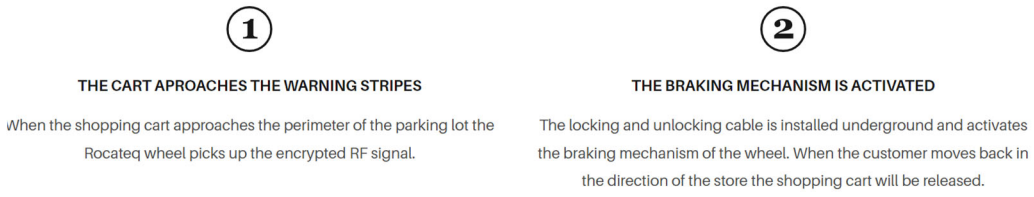
For a rectangular current loop that is centered at the origin of a Cartesian coordinate system, with coordinates (x, y, z), and that resides in the $z = 0$ plane, the magnetic field components are

$$B_x = -\frac{\rho B_0 z}{4}\left[\frac{1}{r_1\,(r_1 - y - a_y)} - \frac{1}{r_2\,(r_2 - y - a_y)} - \frac{1}{r_3\,(r_3 - y + a_y)} + \frac{1}{r_4\,(r_4 - y + a_y)}\right], \quad (8)$$

$$B_y = -\frac{\rho B_0 z}{4}\left[\frac{1}{r_1\,(r_1 - x - a_x)} - \frac{1}{r_2\,(r_2 - x + a_x)} - \frac{1}{r_3\,(r_3 - x - a_x)} + \frac{1}{r_4\,(r_4 - x + a_x)}\right], \quad (9)$$

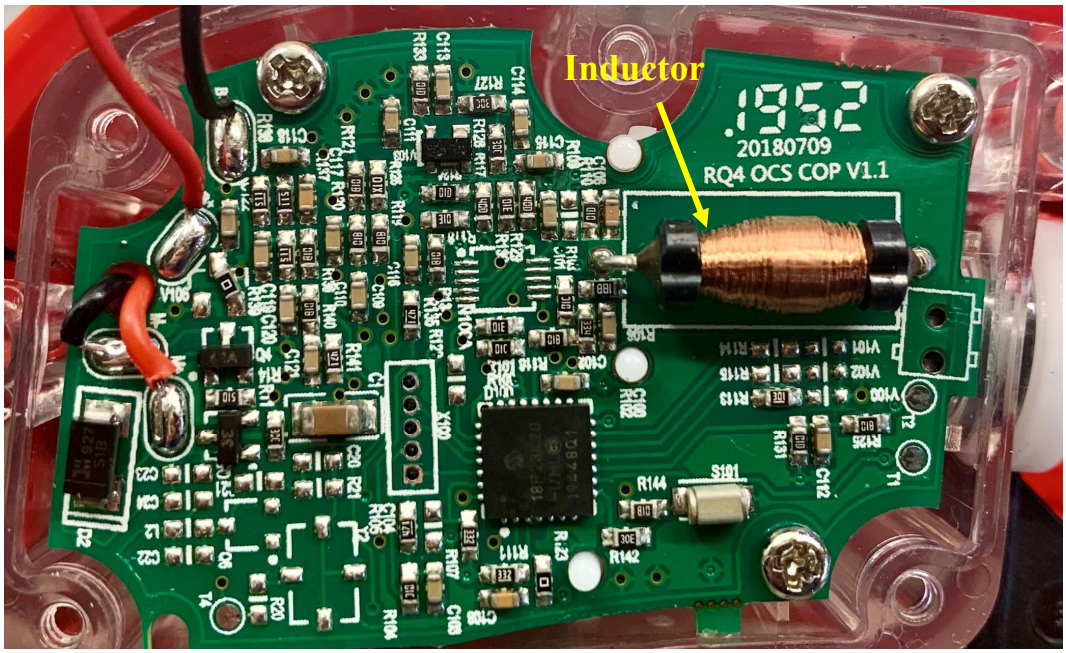
$$B_z = \frac{\rho B_0}{4}\left[\frac{x + a_x}{r_1\,(r_1 - y - a_y)} + \frac{y + a_y}{r_1\,(r_1 - x - a_x)} - \frac{x - a_x}{r_2\,(r_2 - y - a_y)} - \frac{y + a_y}{r_2\,(r_2 - x + a_x)} - \frac{x + a_x}{r_3\,(r_3 - y + a_y)} - \frac{y - a_y}{r_3\,(r_3 - x - a_x)} + \frac{x - a_x}{r_4\,(r_4 - y + a_y)} + \frac{y - a_y}{r_4\,(r_4 - x + a_x)}\right], \quad (10)$$

145. Rocateq's wheel used in the Cart Security system comprises a receiver configured to detect the RF containment signal. See "[w]hen the shopping cart approaches the perimeter of the parking lot the Rocateq wheel picks up the encrypted RF signal" and "[the] locking and unlocking cable is installed underground and activates the braking mechanism of the wheel."[61]



146. The receiver comprises a resonant tank circuit having a single inductor configured to measure a single component of the three components of the asymmetric, fluctuating magnetic field. The below image shows a circuit board from a Rocateq wheel labeled "RQ4 OCS COP V1.1." The image shows a resonant tank circuit having a single inductor.

[61] https://rocateq.com/cart-security/ [last checked Nov. 14, 2022].



The single component of the magnetic field that the receiver measures is the projection of the magnetic field vector onto the axis of the inductor.

147. The receiver in the Rocateq wheel comprises a hardware processor programmed to determine a direction of the cart relative to the boundary of the containment area based at least in part on the measured single component of the three components of the asymmetric, fluctuating magnetic field.

Smart braking mechanism

Your shopping carts stay on **your site**

We replace one of the front wheels of the shopping cart with the Rocateq wheel. This prevents customers from taking your cart home. Your customers can use the shopping cart in your store and on the parking lot. Once they try to leave the parking lot , the Rocateq wheel will lock.

If a customer comes up with the idea of lifting the cart over the locking signal, don't worry this is impossible! When the customer pulls back the shopping cart in the direction of the store, the Rocateq wheel will automatically unlock.

When the cart is traveling out of the parking lot, the wheel locks - "Your customers can use the shopping cart in your store and on the parking lot. Once they try to leave the parking lot, the Rocateq wheel

will lock."[62]

When the cart is traveling back into the parking lot, the wheel unlocks – "When the customer pulls back the shopping cart in the direction of the store, the Rocateq wheel will automatically unlock."[63]

148. On information and belief, Rocateq has infringed and continues to infringe indirectly by way of inducement and contributory infringement, literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271, one or more claims of the '072 Patent by performing, without authority, one or more of the following acts: making, having made, using, importing, selling, and offering for sale in the United States one or more products or services that embody the invention claimed in the '072 Patent, including but not limited to Rocateq's Cart Security system, and encouraging and instructing its customers, end-users, partners, and third parties to make and/or use the Cart Security system in a manner that directly infringes the '072 Patent. Rocateq additionally contributes to and induces direct infringement by its customers, end-users, partners, and other third parties by instructing and encouraging them to make and/or use the Cart Security system in a manner that directly infringes at least one claim of the '072 Patent.

149. Since receiving notice of the '072 Patent, Rocateq has knowingly contributed to the direct infringement of and induced direct infringement of, and continues to knowingly contribute to the direct infringement of and induce direct infringement of, one or more claims of the '072 Patent by its customers, end-users, partners, and third parties with specific intent that the Cart Security system be made and/or used by its customers, end-users, partners, and third parties to directly infringe the '072 Patent, which products constitute a material part of the invention and are not staple articles or commodities of commerce suitable for substantial non-

[62] https://rocateq.com/cart-security/ [last checked Nov. 14, 2022].
[63] https://rocateq.com/cart-security/ [last checked Nov. 14, 2022].

infringing use.

150. Rocateq instructs and encourages its customers, end-users, partners, and third parties to configure and to use the Cart Security system in a manner that directly infringes at least Claim 1 of the '072 Patent as described above. See also generally https://rocateq.com/cart-security/ [last checked Nov. 14, 2022].

151. Rocateq further provides information and technical support on its website (e.g., www.rocateq.com) that instructs and encourages customers, end-users, partners, and third parties on how to use the Rocateq Cart Security system, and thereby induces and contributes to direct infringement by its customers, end-users, partners, and third parties.

152. In each case, the information and materials provided by Rocateq contain detailed descriptions and instructions for making and using the system claimed in at least Claim 1 of the '072 Patent including, at least, that Rocateq requires that one of the front wheels of the shopping cart be replaced with the Rocateq wheel "[that] fits on any cart."[64]

153. By infringing the '072 Patent, Rocateq has caused and will continue to cause Plaintiff Gatekeeper to suffer damages in an amount to be determined at trial, *i.e.*, in an amount that cannot be less than would constitute a reasonable royalty for the use of the patented technology, together with pre-judgment and post-judgment interest thereon.

154. On information and belief, Rocateq has infringed, and continues to infringe, the '070 Patent with full knowledge of the patent and its scope, and Rocateq's infringement of the '072 Patent is intentional, knowing, and willful. Rocateq's conduct entitles Gatekeeper to an award of enhanced damages pursuant to 35 U.S.C. § 284 and attorneys' fees pursuant to 35 U.S.C. § 285.

155. Rocateq's infringement has caused and is causing irreparable harm and

[64] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].

monetary damages to Gatekeeper and will continue to do so until and unless Rocateq is enjoined and restrained by the Court.

SIXTH CAUSE OF ACTION

INFRINGEMENT OF U.S. PATENT NO. 10,196,040

156. Gatekeeper incorporates and realleges each of the allegations contained in paragraphs 1 through 155 of this Complaint as if fully set forth herein.

157. Rocateq is not licensed under the '040 Patent and has no other right or permission to practice the inventions claimed therein.

158. On information and belief, Rocateq has infringed and continues to infringe, directly (alone or jointly), literally, and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271, one or more claims of the '040 Patent by performing, without authority, one or more of the following acts: making, having made, using, importing, selling, and offering for sale in the United States one or more products or services that embody the invention claimed in the '040 Patent, including but not limited to the Rocateq Cart Security system. Since receiving notice of the '040 Patent, Rocateq has knowingly infringed, and continues to infringe, one or more claims of the '040 Patent by making, having made, using, importing, selling, and offering for sale in the United States the Rocateq Cart Security system, which products constitute a material part of the invention and are not staple articles or commodities of commerce suitable for substantial non-infringing use.

159. The Rocateq Cart Security system embodies the patented invention of the '040 Patent and infringes at least Claim 1 of the '040 Patent.

160. For example, Rocateq's Cart Security system comprises:

> "1. A system configured to detect whether an object crosses a boundary of a containment area, the system comprising:

> a receiver configured to detect a radio frequency (RF) containment signal near the boundary of the containment area, the RF containment signal comprising an asymmetric, time-varying component that is associated with an asymmetric, time-varying magnetic field;
>
> the receiver comprising:
>
> a resonant tank circuit having a single inductor circuit that has a single inductor axis,
>
> wherein the single inductor circuit is configured to be responsive to a component of the asymmetric, time-varying magnetic field that is parallel to the single inductor axis; and
>
> a hardware processor programmed to:
> determine a direction of movement of the object relative to the boundary of the containment area based at least in part on the response of the single axis inductor circuit to the component of the asymmetric, time-varying magnetic field that is parallel to the single inductor axis."[65]

161. As explained on Rocateq's website and in documents describing Rocateq's system, Rocateq's Cart Security system is configured to detect whether an object crosses a boundary of a containment area. The Cart Security system comprises a Rocateq wheel used in a shopping cart:

[65] '040 Patent, Claim 1.

Smart braking mechanism

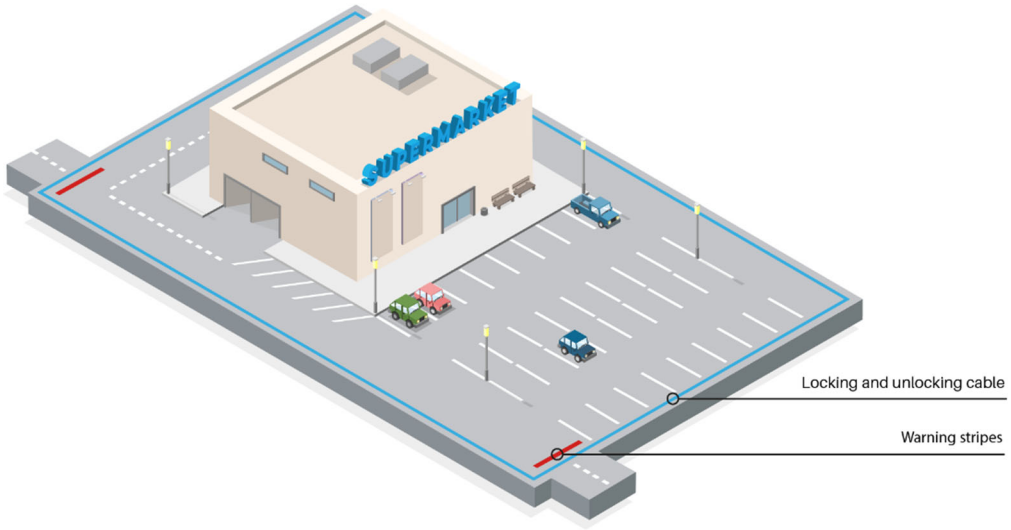
Your shopping carts stay on **your site**

We replace one of the front wheels of the shopping cart with the Rocateq wheel. This prevents customers from taking your cart home. Your customers can use the shopping cart in your store and on the parking lot. Once they try to leave the parking lot , the Rocateq wheel will lock.

If a customer comes up with the idea of lifting the cart over the locking signal, don't worry this is impossible! When the customer pulls back the shopping cart in the direction of the store, the Rocateq wheel will automatically unlock.

"We replace one of the front wheels of the shopping cart with the Rocateq wheel. This prevents customers from taking your cart home. Your customers can use the shopping cart in your store and on the parking lot. Once they try to leave the parking lot, the Rocateq wheel will lock."[66]

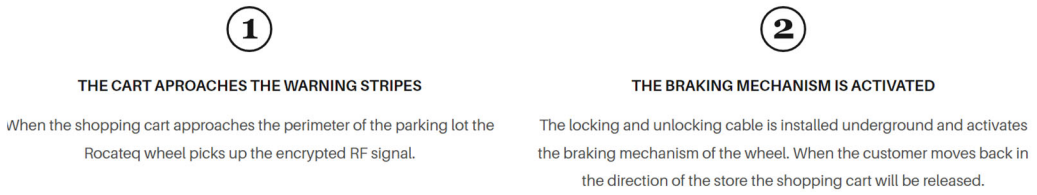
Rocateq's Cart Security system comprises a cable surrounding a containment area and defining a boundary of the containment area. See perimeter "locking and unlocking cable"[67]



162. Rocateq's wheel comprises a receiver configured to detect a radio frequency (RF) containment signal near the boundary of the containment area. See "[w]hen the shopping cart approaches the perimeter of the parking lot the Rocateq wheel picks up the encrypted RF signal" and "[the] locking and unlocking cable is

[66] https://rocateq.com/cart-security/ [last checked Nov. 14, 2022].
[67] https://rocateq.com/cart-security/ [last checked Nov. 14, 2022].

installed underground and activates the braking mechanism of the wheel."[68]



163. A Rocateq Cart Security system is implemented at the Grocery Outlet at 3430 W Lincoln Ave, Anaheim, CA 92801. The sign at the location explains the operation of the Rocateq Cart Security system. See "www.rocateq.com" below picture of shopper with cart.

The Rocateq wheel comprises a receiver configured to detect an RF containment signal comprising an asymmetric, time-varying component that is associated with an asymmetric, time-varying magnetic field.[69] The

[68] https://rocateq.com/cart-security/ [last checked Nov. 14, 2022].
[69] https://rocateq.com/cart-security/ [last checked Nov. 14, 2022].

magnetic field produced by the current in the cable has three time-varying components (Bx, By, Bz).[70]

> For a rectangular current loop that is centered at the origin of a Cartesian coordinate system, with coordinates (x, y, z), and that resides in the $z = 0$ plane, the magnetic field components are

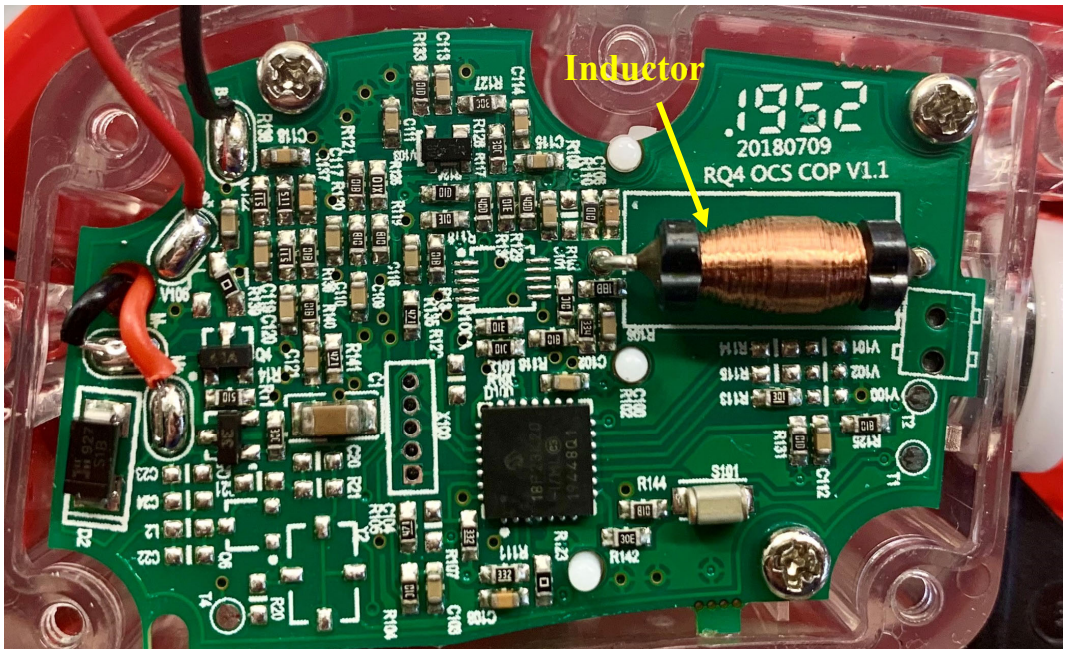
$$B_x = -\frac{\rho B_0 z}{4}\left[\frac{1}{r_1\,(r_1 - y - a_y)} - \frac{1}{r_2\,(r_2 - y - a_y)} - \frac{1}{r_3\,(r_3 - y + a_y)} + \frac{1}{r_4\,(r_4 - y + a_y)}\right], \quad (8)$$

$$B_y = -\frac{\rho B_0 z}{4}\left[\frac{1}{r_1\,(r_1 - x - a_x)} - \frac{1}{r_2\,(r_2 - x + a_x)} - \frac{1}{r_3\,(r_3 - x - a_x)} + \frac{1}{r_4\,(r_4 - x + a_x)}\right], \quad (9)$$

$$B_z = \frac{\rho B_0}{4}\left[\frac{x + a_x}{r_1\,(r_1 - y - a_y)} + \frac{y + a_y}{r_1\,(r_1 - x - a_x)} - \frac{x - a_x}{r_2\,(r_2 - y - a_y)} - \frac{y + a_y}{r_2\,(r_2 - x + a_x)} - \frac{x + a_x}{r_3\,(r_3 - y + a_y)} - \frac{y - a_y}{r_3\,(r_3 - x - a_x)} + \frac{x - a_x}{r_4\,(r_4 - y + a_y)} + \frac{y - a_y}{r_4\,(r_4 - x + a_x)}\right], \quad (10)$$

164. The receiver comprises a resonant tank circuit having a single inductor that has a single inductor axis. The below image shows a circuit board from a Rocateq wheel labeled "RQ4 OCS COP V1.1." The image shows a resonant tank circuit having a single inductor. The single inductor is wound in a single direction and in parallel resulting in a single inductor axis.

[70] See, e.g., S. Hampton, et al, "Closed-form expressions for the magnetic fields of rectangular and circular finite-length solenoids and current loops," available at https://par.nsf.gov/servlets/purl/10220882 at 7.



165. In the Rocateq wheel, the single inductor circuit is configured to be responsive to a component of the asymmetric, time-varying magnetic field that is parallel to the single inductor axis.

166. The receiver in the Rocateq wheel comprises a hardware processor programmed to determine a direction of the cart relative to the boundary of the containment area based at least in part on the measured single component of the three components of the asymmetric, fluctuating magnetic field.

Smart braking mechanism

Your shopping carts stay on **your site**

We replace one of the front wheels of the shopping cart with the Rocateq wheel. This prevents customers from taking your cart home. Your customers can use the shopping cart in your store and on the parking lot. Once they try to leave the parking lot , the Rocateq wheel will lock.

If a customer comes up with the idea of lifting the cart over the locking signal, don't worry this is impossible! When the customer pulls back the shopping cart in the direction of the store, the Rocateq wheel will automatically unlock.

When the cart is traveling out of the parking lot, the wheel locks - "Your customers can use the shopping cart in your store and on the parking lot. Once they try to leave the parking lot, the Rocateq wheel

will lock."[71]

When the cart is traveling back into the parking lot, the wheel unlocks – "When the customer pulls back the shopping cart in the direction of the store, the Rocateq wheel will automatically unlock."[72]

167. On information and belief, Rocateq has infringed and continues to infringe indirectly by way of inducement and contributory infringement, literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271, one or more claims of the '040 Patent by performing, without authority, one or more of the following acts: making, having made, using, importing, selling, and offering for sale in the United States one or more products or services that embody the invention claimed in the '040 Patent, including but not limited to Rocateq's Cart Security system, and encouraging and instructing its customers, end-users, partners, and third parties to make and/or use the Cart Security system in a manner that directly infringes the '040 Patent. Rocateq additionally contributes to and induces direct infringement by its customers, end-users, partners, and other third parties by instructing and encouraging them to make and/or use the Cart Security system in a manner that directly infringes at least one claim of the '040 Patent.

168. Since receiving notice of the '040 Patent, Rocateq has knowingly contributed to the direct infringement of and induced direct infringement of, and continues to knowingly contribute to the direct infringement of and induce direct infringement of, one or more claims of the '040 Patent by its customers, end-users, partners, and third parties with specific intent that the Cart Security system be made and/or used by its customers, end-users, partners, and third parties to directly infringe the '040 Patent, which products constitute a material part of the invention and are not staple articles or commodities of commerce suitable for substantial non-

[71] https://rocateq.com/cart-security/ [last checked Nov. 14, 2022].
[72] https://rocateq.com/cart-security/ [last checked Nov. 14, 2022].

infringing use.

169. Rocateq instructs and encourages its customers, end-users, partners, and third parties to configure and to use the Cart Security system in a manner that directly infringes at least Claim 1 of the '040 Patent as described above. See also generally https://rocateq.com/cart-security/ [last checked Nov. 14, 2022].

170. Rocateq further provides information and technical support on its website (e.g., www.rocateq.com) that instructs and encourages customers, end-users, partners, and third parties on how to use the Rocateq Cart Security system, and thereby induces and contributes to direct infringement by its customers, end-users, partners, and third parties.

171. In each case, the information and materials provided by Rocateq contain detailed descriptions and instructions for making and using the system claimed in at least Claim 1 of the '040 Patent including, at least, that Rocateq requires that one of the front wheels of the shopping cart be replaced with the Rocateq wheel "[that] fits on any cart."[73]

172. By infringing the '040 Patent, Rocateq has caused and will continue to cause Plaintiff Gatekeeper to suffer damages in an amount to be determined at trial, *i.e.*, in an amount that cannot be less than would constitute a reasonable royalty for the use of the patented technology, together with pre-judgment and post-judgment interest thereon.

173. On information and belief, Rocateq has infringed, and continues to infringe, the '040 Patent with full knowledge of the patent and its scope, and Rocateq's infringement of the '040 Patent is intentional, knowing, and willful. Rocateq's conduct entitles Gatekeeper to an award of enhanced damages pursuant to 35 U.S.C. § 284 and attorneys' fees pursuant to 35 U.S.C. § 285.

174. Rocateq's infringement has caused and is causing irreparable harm and

[73] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].

monetary damages to Gatekeeper and will continue to do so until and unless Rocateq is enjoined and restrained by the Court.

SEVENTH CAUSE OF ACTION

INFRINGEMENT OF U.S. PATENT NO. 11,358,621

175. Gatekeeper incorporates and realleges each of the allegations contained in paragraphs 1 through 174 of this Complaint as if fully set forth herein.

176. Rocateq is not licensed under the '621 Patent and has no other right or permission to practice the inventions claimed therein.

177. On information and belief, Rocateq has infringed and continues to infringe, directly (alone or jointly), literally, and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271, one or more claims of the '621 Patent by performing, without authority, one or more of the following acts: making, having made, using, importing, selling, and offering for sale in the United States one or more products or services that embody the invention claimed in the '621 Patent, including but not limited to the Rocateq Check Out Security system. Since receiving notice of the '621 Patent, Rocateq has knowingly infringed, and continues to infringe, one or more claims of the '621 Patent by making, having made, using, importing, selling, and offering for sale in the United States the Rocateq Check Out Security system, which products constitute a material part of the invention and are not staple articles or commodities of commerce suitable for substantial non-infringing use.

178. The Rocateq COS system embodies the patented invention of the '621 Patent and infringes at least Claim 1 of the '621 Patent.

179. For example, Rocateq's Check Out Security system comprises:

> "1. A shopping cart wheel assembly configured to attach to a shopping cart to enable usage of the shopping cart to be monitored and controlled in a vicinity of a store, the shopping cart wheel assembly

comprising:

a wheel;

a brake capable of being activated to inhibit movement of the shopping cart;

a controller configured to control the brake;

a receiver coupled to the controller, the receiver configured to receive an encoded signal transmitted at a first frequency; and

a radio frequency (RF) transceiver coupled to the controller, the RF transceiver configured to send and receive data in a frequency band falling above the first frequency, the RF transceiver being separate from said receiver;

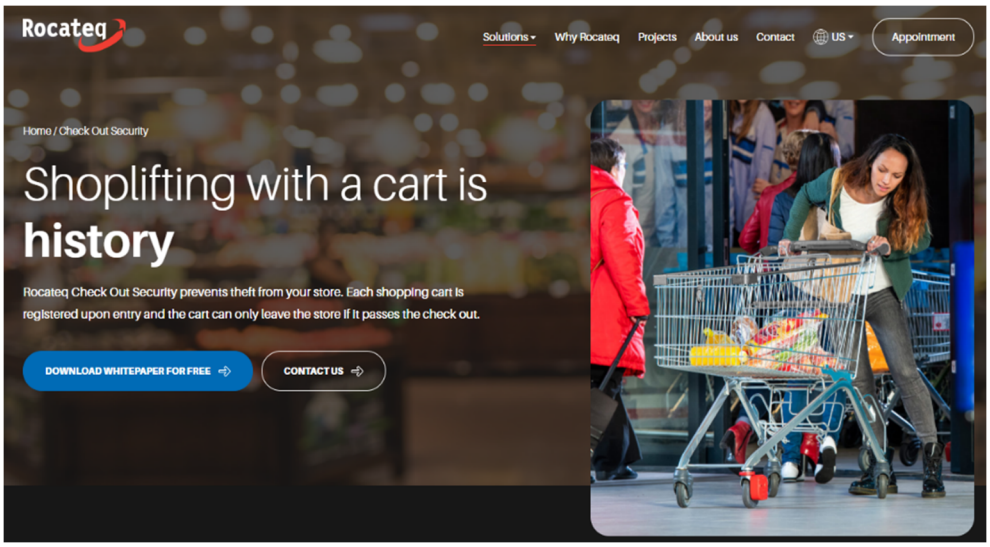
wherein the controller is configured to use the receiver to detect, at least, events in which the shopping cart enters or exits the store, and is configured to use the RF transceiver to wirelessly communicate bi-directionally with a system that is external to the shopping cart;

wherein the controller is configured to determine whether to activate the brake in response to detection of a store exit event based at least partly on content of RF transmissions received by the RF transceiver from the external system."[74]

180. As explained on Rocateq's website and in documents describing

[74] '621 Patent, Claim 1.

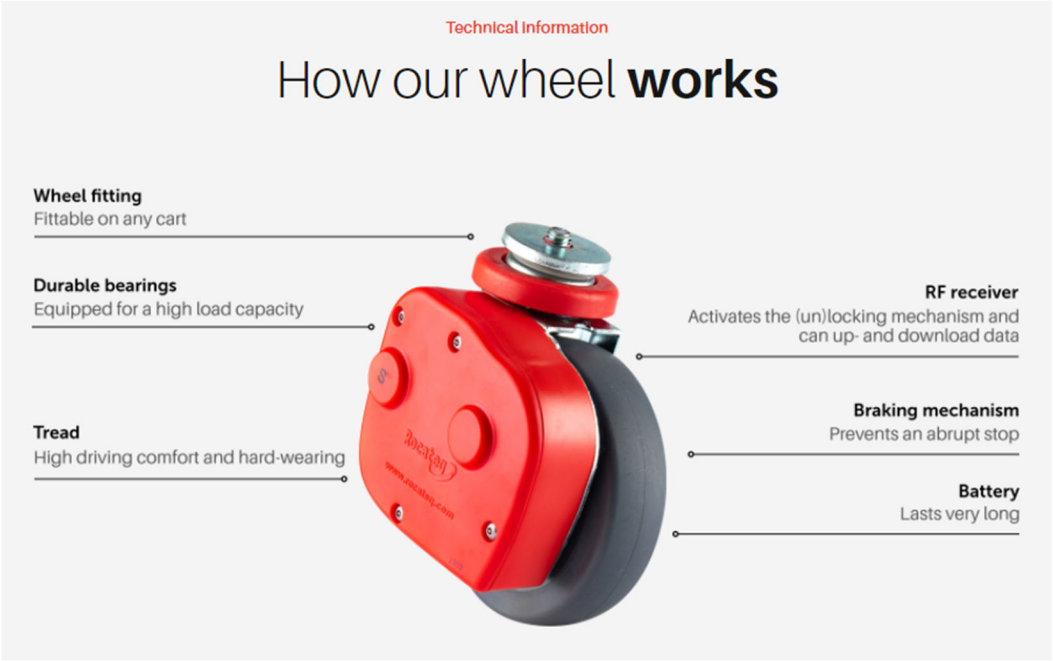
Rocateq's system, Rocateq's COS system comprises a shopping cart wheel assembly configured to attach to a shopping cart to enable usage of the shopping cart to be monitored and controlled in a vicinity of a store:



"Rocateq Check Out Security prevents theft from your store. Each shopping cart is registered upon entry and the cart can only leave the store if it passes the check out."[75]

181. Rocateq's COS system includes a shopping cart wheel and a brake capable of being activated to inhibit movement of the shopping cart, as shown below.[76]

[75] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].
[76] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].



77

182. Rocateq's COS system has a controller configured to control the brake and a receiver coupled to the controller, the receiver configured to receive an encoded signal transmitted at a first frequency.

183. Specifically, Rocateq's wheel detects, at a store entrance and exit, an encoded signal at a first frequency - an 8 KHz signal (also called an "A" signal) from an "Intellibox."[78]

184. Rocateq's COS system has a radio frequency (RF) transceiver coupled to the controller, the RF transceiver configured to send and receive data in a frequency band falling above the first frequency, the RF transceiver being separate from said receiver.

185. Specifically, Rocateq's wheel has a transceiver that detects, at a checkout lane, a 2.4 GHz signal (also called a "B" signal) from a Checkout Transmitter (also called a "Wireless 2.4 GHz transmitter") which signal is in a

[77] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].
[78] https://fcc.report/FCC-ID/2AGTS-INTELLIBOX/4634205.pdf [last checked Nov. 14, 2022].

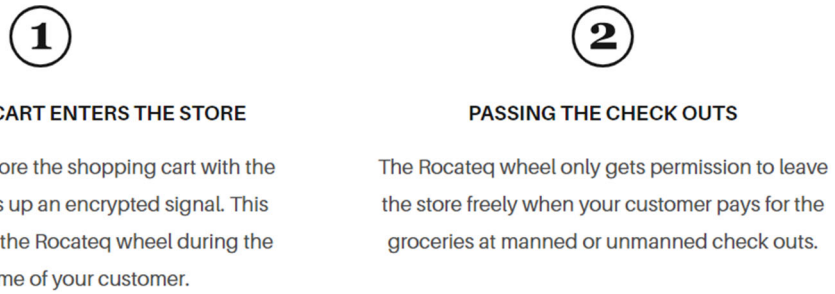
frequency band above the first frequency of 8KHz.[79]

186. Rocateq's wheel has a transceiver that transmits, near the store exit, a 2.4 GHz alarm signal to the Intellibox.[80]

187. Operation of Rocateq's wheel is discussed in Rocateq's FCC filings for the Checkout Transmitter and Intellibox[81]:

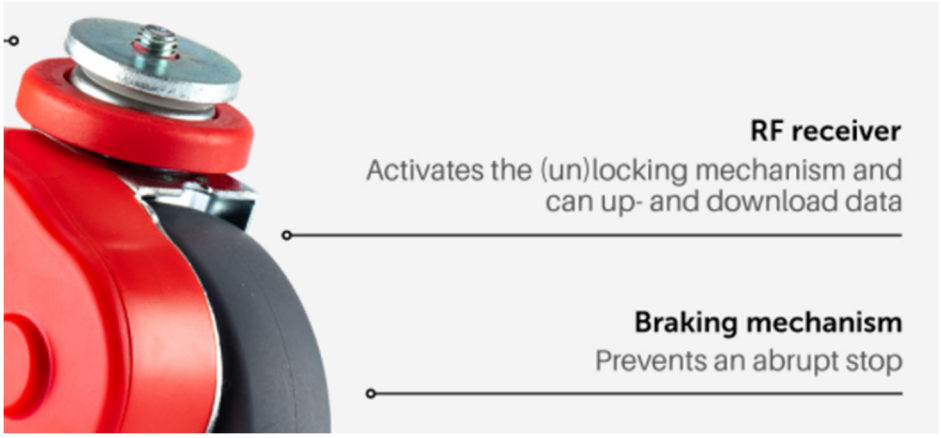
> **3.1. The B signal (2.4 GHz) emitted by Wireless 2.4 GHz transmitter makes the relevant shopping cart casters unlock after receiving A signal (8.13KHz) again.**
>
> 31 Intellibox emits A signal (8.13KHz), C signal (8.13KHz), H signal (8.13KHz), and receives alarm signal (2.4 GHHz). Relevant shopping cart casters receive two A signals (8.13KHz) and lock. Intellibox receives alarm signal and will alarm.

188. Rocateq also disclosed the operation of its wheel on the Rocateq website - see the first two steps of the system's operational summary[82]:



[79] https://fcc.report/FCC-ID/2AGTS-TRANSMITTER/4627456 [last checked Nov. 14, 2022].
[80] https://fcc.report/FCC-ID/2AGTS-INTELLIBOX/4634205.pdf [last checked Nov. 14, 2022].
[81] https://fcc.report/FCC-ID/2AGTS-TRANSMITTER/4627456 [last checked Nov. 14, 2022]; https://fcc.report/FCC-ID/2AGTS-INTELLIBOX/4634205.pdf [last checked Nov. 14, 2022].
[82] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].

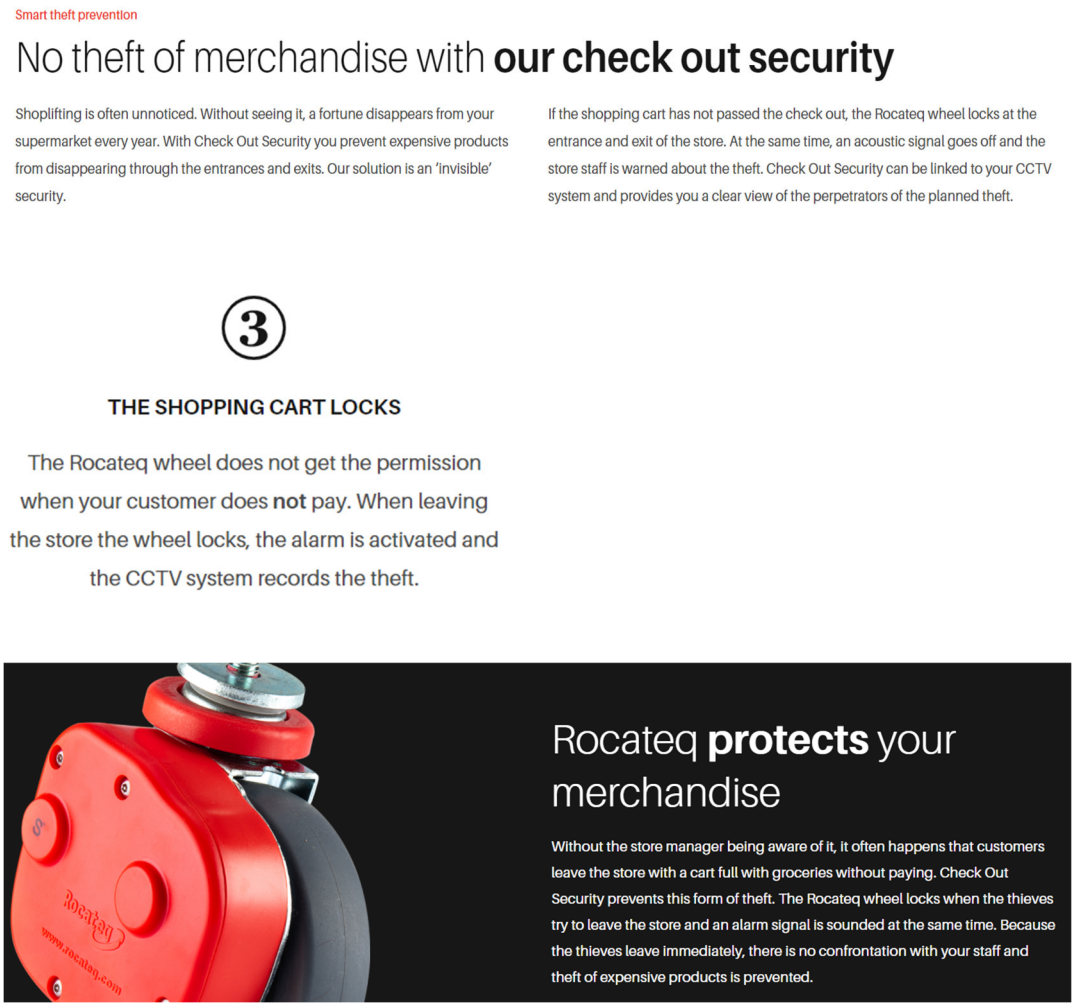
189. Rocateq's wheel has a controller that is configured to use the receiver to detect, at least, events in which the shopping cart enters or exits the store (e.g., receipt of the "A" signal, described above) and is configured to use the RF transceiver to wirelessly communicate bi-directionally with a system that is external to the shopping cart (e.g., communications with the Checkout Transmitter and Intellibox, described above). Rocateq's wheel necessarily "can up- and download data."[83]



190. Rocateq's wheel has a controller that is configured to determine whether to activate the brake in response to detection of a store exit event based at least partly on content of RF transmissions received by the RF transceiver from the external system.

191. Specifically, Rocateq's wheel determines, based on whether the 2.4 GHz signal from the Checkout Transmitter has been received, whether to respond to detection of the 8 KHz signal near the store exit by activating the braking mechanism, as shown below.[84]

[83] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].
[84] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].



192. On information and belief, Rocateq has infringed and continues to infringe indirectly by way of inducement and contributory infringement, literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271, one or more claims of the '621 Patent by performing, without authority, one or more of the following acts: making, having made, using, importing, selling, and offering for sale in the United States one or more products or services that embody the invention claimed in the '621 Patent, including but not limited to Rocateq's COS system, and encouraging and instructing its customers, end-users, partners, and third parties to make and/or use the COS system in a manner that directly infringes the '621 Patent. Rocateq additionally contributes to and induces direct infringement by its customers, end-users, partners, and other third parties by

instructing and encouraging them to make and/or use the COS system in a manner that directly infringes at least one claim of the '621 Patent.

193. Since receiving notice of the '621 Patent, Rocateq has knowingly contributed to the direct infringement of and induced direct infringement of, and continues to knowingly contribute to the direct infringement of and induce direct infringement of, one or more claims of the '621 Patent by its customers, end-users, partners, and third parties with specific intent that the COS system be made and/or used by its customers, end-users, partners, and third parties to directly infringe the '621 Patent, which products constitute a material part of the invention and are not staple articles or commodities of commerce suitable for substantial non-infringing use.

194. Rocateq instructs and encourages its customers, end-users, partners, and third parties to configure and to use the COS system in a manner that directly infringes at least Claim 1 of the '621 Patent as described above. See also generally https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].

195. Rocateq further provides information and technical support on its website (e.g., www.rocateq.com) that instructs and encourages customers, end-users, partners, and third parties on how to use the Rocateq COS system, and thereby induces and contributes to direct infringement by its customers, end-users, partners, and third parties.

196. In each case, the information and materials provided by Rocateq contain detailed descriptions and instructions for making and using the system claimed in at least Claim 1 of the '621 Patent including, at least, that Rocateq requires that one of the front wheels of the shopping cart be replaced with the Rocateq wheel "[that] fits on any cart."[85]

197. By infringing the '621 Patent, Rocateq has caused and will continue to

[85] https://rocateq.com/check-out-security/ [last checked Nov. 14, 2022].

cause Plaintiff Gatekeeper to suffer damages in an amount to be determined at trial, *i.e.*, in an amount that cannot be less than would constitute a reasonable royalty for the use of the patented technology, together with pre-judgment and post-judgment interest thereon.

198. On information and belief, Rocateq has infringed, and continues to infringe, the '621 Patent with full knowledge of the patent and its scope, and Rocateq's infringement of the '621 Patent is intentional, knowing, and willful. Rocateq's conduct entitles Gatekeeper to an award of enhanced damages pursuant to 35 U.S.C. § 284 and attorneys' fees pursuant to 35 U.S.C. § 285.

199. Rocateq's infringement has caused and is causing irreparable harm and monetary damages to Gatekeeper and will continue to do so until and unless Rocateq is enjoined and restrained by the Court.

PRAYER FOR RELIEF

WHEREFORE, Gatekeeper respectfully demands judgment against Defendants as follows:

A. Judgment in favor of Gatekeeper and against Defendants for direct infringement of one or more claims of each of the Patents-in-Suit;

B. Judgment in favor of Gatekeeper and against Defendants for induced infringement of one or more claims of each of the Patents-in-Suit;

C. Judgment in favor of Gatekeeper and against Defendants for contributory infringement of one or more claims of each of the Patents-in-Suit;

D. Entry of a permanent injunction enjoining Defendants and its affiliated entities, officers, agents, servants, employees, and those persons in active concert or participation with them who receive actual notice thereof, from directly or indirectly infringing, inducing the infringement of, or contributing to the infringement of each of the Patents-in-Suit;

E. Entry of judgment that Defendants' infringement is and has been willful;

F. An award to Gatekeeper of compensatory damages arising out of Defendants' infringement in an amount not less than a reasonable royalty under 35 U.S.C. § 284, including damages for any continuing post-verdict infringement up until entry of the final judgment and increased damages for Defendant's willful infringement, together with pre-judgment and post-judgment interest thereon;

G. Treble the damages award to Gatekeeper under 35 U.S.C. § 284;

H. Entry of judgment that this is an exceptional case and award to Gatekeeper of costs, interest, and reasonable attorneys' fees incurred herein under 35 U.S.C. § 285;

I. To the extent an injunction against further infringement by Defendants is not entered by the Court, an accounting for future sales and an award to Gatekeeper of compensatory damages arising out of Defendants' ongoing infringement and increased damages for Defendants' willful ongoing infringement; and

J. Such other and further relief as the Court may deem just and appropriate.

DEMAND FOR JURY TRIAL

K. In accordance with Rule 38 of the Federal Rules of Civil Procedure and Local Rule 38-1, Plaintiff demands a trial by jury on all issues so triable.

Dated: November 17, 2022

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